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UNITED STATES DEPARTMENT OF LABOR

W. N. DOAK, Secretary

BUREAU OF LABOR STATISTICS

CHARLES E. BALDWIN, Acting Commissioner

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This Issue in Brief

The output per employee in the electric light and power industry increased 260 per cent from 1902 to 1927, according to a recent study made by the Bureau of Labor Statistics. There has been little, if any, actual displacement of labor, however, except through the curtailment that took place during 1930 and 1931. In most instances the loss of employment opportunities because of the abolition of positions as a result of installation of larger units or automatic devices has been offset by the labor demand created through the tremendous expansion of the industry and the increase in activities undertaken to give reliable and uninterrupted service. Page 249.

Size of plant, degree of mechanization, wages paid, kind of ore handled, and character of labor are all factors entering into efficiency (as measured by man-hour productivity) in the blast-furnace industry. This is indicated by an analysis of data gathered in the 1929 Census of Manufactures. The plants with the largest output of pig iron produced more than four times as much per man-hour as did the plants with the smallest output. The plants having the lowest output per man-hour were those paying the lowest hourly wage, while the plants with the highest man-hour output were those paying the highest wages. In the highest-wage plants the man-hour production was more than eleven times as great as in the lowest-wage plants. Page 260.

The actual earnings of pilots in air transportation in October, 1931, averaged \$569.49 per month; of copilots, \$227.89 per month; and of all other employees, \$31.66 per week. Pilots' average monthly earnings ranged from \$482.45 in the South Central section to \$617.84 in the South Atlantic section. Average earnings per flight-hour ranged from \$5.565 in the South Central section to \$8.066 in the Western, being \$7.084 for all districts combined. A few companies pay pilots a monthly salary regardless of hours flown, but the majority pay a monthly salary plus a specified rate for each mile flown. The average full-time flight-hours of pilots are fixed at a maximum of 110 per month, but the hours actually flown in October, 1931, averaged only 80.4. Detailed data for pilots, copilots, and other employees connected with air transportation are given in an article on page 339 summarizing the results of the first study of this industry made by the Bureau of Labor Statistics.

Hourly earnings of workers in the dyeing and finishing of textiles in 1932 averaged 41.8 cents for males and 29 cents for females, as compared with 47.3 cents and 33.5 cents, respectively, in 1930, according to a survey by the Bureau of Labor Statistics. Average full-time weekly earnings of males were \$21.49 in 1932 and \$24.12 in 1930, and of females, \$14.85 in 1932 and \$16.92 in 1930. Full-time working hours per week of males averaged 51.4 in 1932 and 51 in 1930, and of females, 51.2 in 1932 and 50.5 in 1930. Page 349.

Cost of living in the United States was 6.9 per cent lower in June, 1932, than in December, 1931, and 9.7 per cent lower than in June,

1931, as determined by the Bureau of Labor Statistics in its semi-annual survey of cost of living. The index number of cost of living for June, 1932, is 135.7, based on the cost in 1913 as 100. Page 421.

The adoption of a 6-hour-shift system by the India Tire & Rubber Co. has proved extremely satisfactory from the standpoints of improved production, decreased labor costs, and reduced absenteeism, and, in addition, has resulted in giving employment to one-third more workmen. Page 369.

A 40-hour week has been established by the Standard Oil Co. of New Jersey for all its operations in this country, in order to provide all practicable assurance of continued employment, and to effect further economies in operation. Wage earners paid by the hour will continue to be paid on the basis of time actually worked, but the pay of executives and salaried workers is reduced one-eleventh, with the exception that no salary of \$100 or less per month will be affected. The change became effective July 1. Page 367.

British Columbia is developing an extensive plan for the settlement of unemployed married men on the land. Prospective settlers will be selected by a nonpolitical board already appointed for this purpose, selection to be made on the basis of farming experience and the desire to go back to this occupation. Settlement will be made in agricultural districts convenient to markets and already having both roads and schools. It is expected that by the end of two years most of the families will be largely self-supporting. Page 281.

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Labor Productivity and Displacement in the Electric Light and Power Industry

THE United States Bureau of Labor Statistics has recently completed a study of technological changes in the electric light and power industry, with special reference to their effects upon labor. Although quinquennial censuses of the industry are made by the Bureau of the Census, these figures are not separable as regards operating and maintenance employees and are lacking in one respect very important from the labor standpoint, namely, data as to man-hours worked. The study by the Bureau of Labor Statistics covered 10 representative electric-power companies or systems, employing an average of 18,087 workers in 1930.

The electric light and power industry, according to a report of the National Electric Light Association, ranks thirteenth among the industries in number of employees and in the value of its product, while from the standpoint of money invested it ranks fifth.

So great has been the increase in output per employee in this industry that, at a conservative estimate, it would require between 75 and 100 per cent more operating and maintenance employees to produce, transmit, and distribute the present output, using the same sizes and types of equipment and with the same output per employee found 15 or 20 years ago.

There has, however, been little, if any, actual displacement of labor except, as in most other industries, through the curtailment that took place as a result of the current depression. In most instances in which positions have been abolished because of the installation of larger units or automatic devices, the employees affected, generally speaking, have been absorbed through the tremendous expansion of the industry in recent years. Another labor-absorbing factor has been the increased number of activities undertaken to give reliable and uninterrupted service.

The major changes and improvements in this industry that have served to increase the output per employee may be briefly summarized as follows:

1. Use of mechanical stokers and pulverized-fuel burners.
2. Improvement of the load factor.¹
3. Use of larger and more compact generating and boiler units.
4. Consolidation and interconnection of systems.
5. Increased voltages (pressures) and long-distance transmissions.

¹ The "load factor" is the ratio of the peak demand to the power generated.

6. Unattended, remote-control substations.
7. Unattended, remote-control hydroelectric generating stations.
8. Improvement in the construction and wearing qualities of electrical equipment, with corresponding reduction in the maintenance required.

Development and Changes in the Industry

THE first public electric-power plant in the world was established by Thomas Edison in 1882. It was located on Pearl Street in New York City and was used principally for supplying illumination to fewer than a hundred customers within a radius of 10 or 12 city blocks.

In the year 1886 George Westinghouse and William Stanley produced a practical commercial transformer and opened the way for alternating-current distribution and its transmission to distant points.

Previous to the introduction of alternating current, about 1890, all electric current was generated, transmitted, and distributed as direct current.² Principally because of the great losses involved in transmitting direct current for any distance, the use of the power was limited to restricted areas near the power house where it was generated, and as a result the industry made no real progress until after introduction of alternating current.³

The change from direct to alternating current undoubtedly paved the way for all subsequent progress in the industry as regards the transmission and distribution, making possible as it did the transmission of electric energy over considerable distances and eliminating the necessity of locating power plants near the load areas. Water-power sites remote from centers of population could be utilized; for steam plants sites could be selected that were advantageous as to fuel supply and abundance of cooling water, the latter being particularly important for steam-turbine operation.

The most obvious characteristic of the electric light and power industry during the past 25 years has been its uninterrupted growth. This has been accompanied by a continuous increase in mechanization and in the size both of the individual plant and of the generating units, involving a decided increase in the number of establishments. Comparing the year 1927 (the latest year for which census figures are available) with 1902, the number of kilowatt-hours generated was almost thirty times as large; the kilowatt capacity of generators twenty-one times as large; the horsepower of prime movers nineteen times as great; the value of plant and equipment eighteen times as great; and the number of persons employed eight times as large.

During the same period the number of kilowatts of capacity per employee increased from 40 to 103, and the yearly output per employee from 82,700 to 297,500 kilowatt-hours. Eight times as many employees in 1927 as in 1902 generated thirty times as much energy. The explanation is to be found chiefly in the progress of mechanization.

There has been a gradual shift toward a larger ratio of salaried employees to wage earners in both commercial and municipal power plants as technical progress has reduced the amount of labor to be performed.

² I. e., current that flows always in the same direction.

³ I. e., current that periodically and rapidly reverses the direction of its flow.

Table 1 shows the development in the industry, by 5-year periods, from 1902 to 1927.

TABLE 1.—DEVELOPMENT OF ELECTRIC-POWER INDUSTRY IN THE UNITED STATES, BY 5-YEAR PERIODS, 1902 TO 1927

Census year	Number of employees			Total generated output (in kilowatt-hours)	Output per employee	
	Wage earners	Salaried employees	Total		Kilowatt-hours	Index numbers (1902=100)
1902.....	23,330	6,996	30,326	2,507,051,115	82,670	100
1907.....	34,642	12,990	47,632	5,862,276,737	123,074	149
1912.....	53,242	26,093	79,335	11,569,109,885	145,826	176
1917.....	70,135	35,406	105,541	25,438,303,272	241,028	292
1922.....	95,650	55,112	150,762	40,291,536,435	267,253	323
1927.....	149,605	101,415	251,020	72,686,378,010	297,532	360

The most outstanding changes in power production during this period have been the rapidly increasing concentration of power; the rise in steam pressures and steam temperatures used; the experimental introduction of a second working fluid (mercury) in an independent cycle supplementing that of steam; and the increased rating of boilers, turbines, water wheels, generators, transformers, and the power plants themselves.

As in other industries there has been the increasing mechanization of the power plant. Where formerly the firing of the boilers was a matter of human muscle, and the feeding of coal into the furnaces by the shovelful had called for exhausting labor on the part of a host of firemen, the modern power plant uses mechanical stokers or pulverized fuel blown into the furnace by an air blast. The rate of feed, the adjustment of the draft, and other operations are performed automatically. The work of the employee has changed from that of laborer to that of supervisor of the apparatus that performs the physical work.

The year 1912 marked a rapid change from the reciprocating engine to the steam turbine as a prime mover for power plants. Then, with the change in steam turbines from the vertical-shaft to horizontal-shaft type, came a corresponding change to boilers of greater size, higher steam pressures, and higher temperatures. Other features gradually introduced into steam-plant practice include the cooling of the furnace walls by means of air or water, the preheating of the air supply to the furnace, the use of high-refractory brick around the fuel and clinker lines of the furnace side walls, the reheating of the steam at some point in its passage through the turbine, the bleeding of steam from the turbine at a certain stage in its expansion and the utilization of its heat in another stage of the process, and the burning of pulverized coal.

Other changes in the industry have been the increasing (though still proportionately small) use of the internal-combustion engine, introduction of remote control of substations, improved cooling systems for the steam turbo-generators, the increase in the size of transformers, the development of large mercury-arc rectifiers for converting alternating to direct current, and, very recently, important advances in transmission by means of underground cable.

Number of Employees in Relation to Output

THE number of employees required in a power plant does not increase proportionately with the size of the plant. No more operating employees are required for a 50,000-kilowatt generator than for a 5,000 or 10,000 kilowatt generator. The same is true of boiler and other auxiliary equipment and to some degree of all branches of the industry. As the trend has been toward larger power plants, displacing many small ones, it will be readily seen that, taking the country as a whole, this has undoubtedly resulted in a very substantial loss of employment opportunities. This loss, however, has been more than offset by the remarkable expansion of the industry in recent years, and it is questionable whether this growth would have been possible without the larger units. It has been characteristic of this industry that a reduction of rates usually results in increased output, and it is claimed that reductions in rates have been made possible only by reason of economies in operation, such as the installation of larger and more efficient generating and boiler units, high-voltage transmission lines, interconnection, etc.

The relation between output and number of employees in this industry differs radically from that of most of the manufacturing industries, as the electric light and power industry is one of the few industries manufacturing, transporting, and distributing its products to the ultimate consumer.

The unit of output in this industry is the kilowatt-hour (representing the use of 1,000 watts for 1 hour or the use of 1 watt for 1,000 hours). The output is not capable of separation as to stages of manufacture and consequently must be considered as the joint product of all of the employees engaged in its generation, transmission, and distribution.

The duties of most of the operating and maintenance employees in this industry are of a supervisory character. Because of the nature of the product, the employees are not in a position to control their output; that is to say, the output in kilowatt-hours per employee for any given period is dependent to a large extent on the demands of the consumers. Thus, while the number of kilowatt-hours per employee or per man-hour in this industry does indicate the trend in productivity over a period of years, it is by no means a scientifically accurate measurement of the efficiency of the employees, because of the variations in the load factor and the fluctuations in the demand for power.

In many of the companies visited during the bureau's study, it was found that the output could have been materially increased without increasing the number of operating employees. On the other hand, a decrease in kilowatt-hour output does not necessarily result in the displacement of labor in so far as the regular operating and maintenance employees are concerned. It will thus be seen that increases or decreases in plant production affect the employee-output figure without necessarily changing the number of employees.

Table 2, which follows, shows the additional number of employees that would be required in 10 representative systems (companies) had the output per employee remained the same as in the earliest year for which data were obtained. The number of years considered for each

individual system varies according to the available records, but in each case the calculations are based on the output per employee for the earliest year obtainable. This tabulation includes the average number of all operating and maintenance employees in the generation, transmission, and distribution departments, but does not include any employees engaged in the administrative, accounting, clerical, or new-construction departments. New construction was excluded because of its fluctuating amount from year to year.

TABLE 2.—NUMBER AND PER CENT OF EMPLOYEES THAT WOULD BE REQUIRED IN 10 REPRESENTATIVE SYSTEMS, AT RATE OF OUTPUT FOR BASIC YEAR

System	Number of years for which information was obtained	Average number of employees for latest year ¹	Number of employees required on basis of output for earliest year	Loss of employment opportunities	
				Estimated number	Per cent
System No. 1.....	11	1,824	2,509	685	38
System No. 2.....	11	2,044	2,516	472	23
System No. 3.....	20	3,587	5,388	1,801	50
System No. 4.....	5	605	521	(²)	-----
System No. 5.....	18	1,072	4,526	3,454	322
System No. 6.....	16	541	1,298	757	140
System No. 7.....	8	972	1,258	286	29
System No. 8.....	14	2,073	4,294	2,221	107
System No. 9.....	11	3,905	8,210	4,305	111
System No. 10.....	7	468	679	211	45

¹ Latest year was 1931 in 8 systems, and 1930 in 2 systems.

² There was no loss of employment opportunities in this case; on the contrary, due to drop in industrial load, there would be a gain of 84 positions if figured on the basis of output for the earliest year.

Table 2 shows that the loss of employment opportunities because of the increased output per employee varies from system to system and is dependent on several factors, such as the number of years for which comparison is made, the extent of the territory served, the policy of the individual system, and the character of the power and lighting load.

Using system No. 1 of this table as an illustration, it will be noted that, in the most recent year for which data were obtained, an average of 1,824 workers was employed. But on the basis of output in the earliest year of the 11-year period covered by the figures, 2,509 employees would have been required, or 685 (38 per cent) additional.

Table 3 shows output per man-hour for nine of the systems studied. It should be emphasized that the output per man-hour for any one system is not comparable with that of any other system, because of differences as to policy, territory served, etc., among the various systems.

TABLE 3.—OUTPUT PER MAN-HOUR, IN KILOWATT-HOURS, AND PER CENT OF INCREASE DURING PERIOD STUDIED, IN EACH OF NINE SYSTEMS

Year	Output per man-hour (in kilowatt-hours)								
	System No. 1	System No. 2	System No. 3	System No. 4	System No. 5	System No. 6	System No. 7	System No. 8	System No. 10
1912			332						
1913			316						
1914			345						
1915			418						
1916			406			109			
1917			429			133			
1918			480			203			
1919			476			262			
1920	110	357	501		128	171			
1921	123	339	517		111	133			
1922	127	389	607		175	143			
1923	125	398	587		186	166			
1924	129	351	539		200	182	218		
1925	126	384	551		240	185	194		570
1926	128	417	598		244	184	229		621
1927	140	437	620	180	249	195	254	421	709
1928	145	475	649	161	294	227	275	441	721
1929	153	481	601	166	320	280	307	506	722
1930	170	441	621	158	342	317	323	512	783
1931			624	144	329	304	281	607	828
Per cent of increase in latest as compared with earliest year	55	23	88	¹ 20	79	179	29	44	4

¹ Decrease, due to the retention of certain employees for use in a new generating station under construction.

Some of the principal reasons for the great increase in the productivity of the employees in this industry may be summarized as follows:

1. The increased size and efficiency and the improved construction of the generating units, boilers, and auxiliary equipment used, resulting in a proportionately smaller number of employees per unit of equipment.

2. The progress made in the transmission of electric current over long distances and at high voltages, resulting in the linking of many small isolated plants with the large systems and in the connection of hydro and steam generating facilities within the same system. As in other industries, the principle of mass production has been highly developed, with a gradual elimination of the small isolated generating plants and the carrying of the base power loads by the larger and more efficient central plants. (The 1927 census figures showed a decrease in the number of establishments in this industry from 6,542 in 1917 to 4,335 in 1927.)

The improvement, during recent years, in the load factor (i. e., the ratio of the peak demand to the power generated). As the load factor indicates the extent to which the generating equipment is being used, its improvement has resulted in the securing of more hours of use from the generators and has been reflected in increased output per employee.

It will be observed from Table 4 that in all but one of the systems the increase in the total yearly output and also in the generating capacity was relatively higher than the increase in the number of employees.

TABLE 4.—PER CENT OF INCREASE IN AVERAGE NUMBER OF EMPLOYEES, ANNUAL OUTPUT AND KILOWATT CAPACITY IN EACH OF 10 REPRESENTATIVE SYSTEMS

System	Number of years for which information was obtained	Per cent of increase (from earliest to latest year studied) in—		
		Average number of employees	Total yearly output	Kilowatt capacity of generators
System No. 1.....	11	59	119	139
System No. 2.....	11	92	137	176
System No. 3.....	20	272	459	478
System No. 4.....	5	10	16	12
System No. 5.....	18	77	649	416
System No. 6.....	16	209	642	755
System No. 7.....	8	32	71	226
System No. 8.....	14	97	307	362
System No. 9.....	11	35	184	201
System No. 10.....	7	(³)	44	44

¹ Decrease, due partially to the removal of one generating unit and a drop in the industrial load without a proportionate drop in employees. The employees in this case were retained because of the building of an additional generating station.

² This system purchases the bulk of its electric output, and consequently, has not shown a proportionate growth in its generating capacity.

³ No change.

Effect of Automatic Equipment on Employment Opportunities

Generation of Electric Power from Steam

IN THE United States about 60 per cent of the total electric power is generated from steam, while most of the remaining 40 per cent is derived from water power.

In the generation of electric power from fuel, either coal, natural gas, or oil is used. Coal is by far the major fuel used.

The heat energy of the fuel produces steam which in turn is used to drive the steam turbine. The steam turbine consists of a large number of vanes mounted on a shaft called a rotor, and as the energy of the steam reaches the vanes it causes them and the rotor to revolve at a very high speed. As the steam goes through the turbine, it passes down into the condenser where cool water changes the steam back to water which is then returned to the boiler and is again converted into steam.

The generator is attached to the rotor, and the rotating power of the latter drives the generator, producing the electric current. As the electric energy leaves the generators it is measured, concentrated on copper rods called bus bars, or buses, and is then switched to the proper circuits. The circuits either distribute the energy directly to nearby points or carry the current to transformers which increase the voltage (pressure) for transmission to distant points.

During 1928, of the coal burned for the production of electric power, 97.7 per cent was fired mechanically, while 2.3 per cent was burned under the hand-fired boilers still used by a few small plants. The types of mechanical stokers used were (1) the underfeed stokers in which the coal is inserted below the surface of the fuel bed, the volatile constituents of the coal being distilled off and passing up through the incandescent fire where they are ignited and burned; (2) the overfeed stoker, with inclined grate and natural draft, used to a limited extent for burning bituminous coal under small boilers; (3) the chain-grate stoker, an endless conveyor traveling through the furnace from front to rear; and (4) the pulverized-coal burner, using

finely pulverized coal blown into the furnace and burned in the form of a jet.

Most mechanical stokers are controlled by regulators which are set to maintain a predetermined steam pressure and are automatically affected by changes in this pressure. A drop in the steam pressure causes an increase in the speed of the fan and the stoker, thus allowing more coal and air to enter, and in turn halting the fall of the pressure. Increase of the pressure causes a decrease in the amount of coal allowed to enter.

The use of mechanical stokers is by no means a recent development. Such stokers were in use prior to the year 1900 and have formed part of the original equipment of practically all the important companies that have begun their operations since that time.

It is not possible to determine with any degree of accuracy the probable displacement of firemen by reason of the use of mechanical stokers in the electric light and power industry. Also, the great variation in the sizes and types of stokers used makes it almost impossible to arrive at any reliable estimate of the number of employees now required in the operation of mechanical stoking devices.

Some idea of the reduction in employment opportunities due to mechanical stokers may be gained, however, from an estimate given by one electric-power company. This company has 24 underfeed stokers in operation, requiring the services of 14 employees working in 3 shifts of 8 hours each. As this company has used only the mechanical stokers since beginning operations, an accurate measure of the increased labor efficiency of the mechanical stoker as compared with the hand-fired boiler is impossible. The company estimates, however, that approximately 200 firemen, in three 8-hour shifts, would be required to feed by hand the 24 boilers now being fed by mechanical stokers and attended by 14 employees.

According to the United States Geological Survey, 50,654,000 tons of coal were consumed in the production of electricity in the United States during the year 1930. Had this entire amount been hand fired instead of being mechanically fired, as 98 per cent of it actually was, it may be conservatively estimated that the services of approximately 35,000 firemen working 8-hour shifts would be required. In arriving at this estimate, it was assumed that the coal would be located conveniently near the boiler and that the duties of the firemen would not include the wheeling or other transportation of the coal either within or without the plant.

Generation of Electric Power from Water

In the generation of hydroelectric power, the water may be obtained either directly from the stream or from storage dams. A diversion dam is usually built at the narrowest point of the stream and an intake tower (or "headworks") is constructed immediately above the dam and having on the open side racks or bars to permit the entrance of the water and to exclude débris. This intake tower is equipped with iron gates which can be opened or closed as desired.

From the intake tower the water which is not under pressure flows into a pipe or tunnel to the "forebay," a small concrete regulatory reservoir so constructed as to secure the maximum head or fall with a minimum of pressure pipe, or "penstock." The penstock carries

the water under pressure from the forebay to the power house below. The number or size of the penstocks used is dependent on the layout of the particular plant. While a separate pressure pipe may be used for the operation of each of the generating units, often there are only one or two large pipes between the forebay and a point near the power house; from this point the penstocks are divided by means of a Y connection, thus creating a direct flow to each generating unit.

The pressure or volume of water from the penstocks as it enters the power house is utilized to operate either a water (impulse) wheel or a hydraulic turbine which in turn operates the generator.

The water, after being utilized in either the impulse wheel or the hydraulic turbine, flows by gravity to the tailrace or "afterbay" below. This tailrace often serves as a forebay for another power house farther down the stream or river and thus the same water serves over and over again for the generation of power.

Table 5 presents a comparison of a representative hydroelectric plant before and after the installation of certain semiautomatic devices, the year 1928 being taken as representative of conditions before the change and 1931 as representative of those after the change. The generator capacity and static head was the same in both years—one 225-kilowatt generator (at 90 per cent P. F.), with a static head of 627 feet and four kilowatt generators (at 90 per cent P. F.) with a static head of 1,905 feet. The plant was on an 8-hour day in both years.

TABLE 5.—EFFECTS OF INTRODUCTION OF SEMIAUTOMATIC DEVICES IN A HYDRO-ELECTRIC COMPANY

Item	Before change	After change
Number of employees:		
Station chief.....	1	1
Assistant station chief.....	1	
Operators.....	3	2
Truck driver.....	1	
Headworks tender.....	1	
Utility man.....		1
Total.....	7	4
Output (in kilowatt hours):		
Total.....	11, 588, 371	11, 373, 705
Per employee.....	1, 655, 482	2, 843, 426
Per man-hour.....	71, 204	125, 330

It will be noted from the foregoing comparison that the following changes occurred as a result of the installation of semiautomatic devices in this plant: (1) The number of employees decreased 40 per cent; (2) while the total output for the year decreased about 2 per cent, the output per employee increased over 70 per cent; and (3) output per man-hour increased more than 75 per cent.

The change of this plant to a semiautomatic basis involved the regulation of the water from the forebay to make possible the complete utilization of all available water. When sufficient water is available not only for the full-load operation of four units but also for the partial operation of the fifth unit, the four units are set to generate the full load and the automatic features are placed in operation on the fifth unit, so that increases or decreases in the water are reflected in increased or decreased generation by the fifth unit. In

order to detect trouble, thermostats have been installed on the bearings and field coils of the generator, so that a rise in the temperature automatically causes an alarm to ring and cuts off the generator. The restarting of the generator is not automatic.

Transmission and Distribution of Current

The number or size of the substations through which the power is transmitted varies considerably from system to system and is dependent on many factors, such as the extent of the territory served, the load, etc. The substations are usually located in the center of the demand areas. They vary considerably as regards number of employees required, and some are entirely automatic in their functioning.

There is a decided tendency on the part of many large systems to put all substations on a semiautomatic or full automatic basis wherever possible, and of recent years there has been a rapid growth in the number of unattended, automatic substations, due principally to the installation of relay and protective equipment. Control relays are used to start the machines as load conditions require, to connect the unit to the line, and to shut it down when no longer needed. Protective relays furnish the protection desired against abnormal conditions such as short circuits, etc.

In one large system, in 1931, of a total of 325 substations in operation, 233 (72 per cent) were entirely automatic while the other 92 (28 per cent) required some attendance.

Table 6 shows the spread of the automatic type of substation since 1920 in five of the systems studied.

TABLE 6.—NUMBER OF ATTENDED AND UNATTENDED SUBSTATIONS IN FIVE REPRESENTATIVE SYSTEMS IN THE UNITED STATES, 1920 TO 1930

Year	Number of substations	
	Attended	Unattended
1920.....	137	46
1921.....	136	60
1922.....	141	61
1923.....	146	71
1924.....	155	113
1925.....	177	116
1926.....	180	133
1927.....	184	158
1928.....	192	162
1929.....	192	179
1930.....	193	193
Per cent of increase.....	41	320

Table 7, which follows, shows that the number of kilowatts of substation equipment per employee, and therefore the amount of attention necessary for this substation equipment, has shown a substantial increase in each of the systems studied.

It will be further observed that the greater the number of years for which information was available within any one system the greater was the per cent of increase shown.

TABLE 7.—NUMBER AND PER CENT OF INCREASE IN KILOWATTS OF SUBSTATION EQUIPMENT PER SUBSTATION EMPLOYEE FOR THE NUMBER OF YEARS STUDIED IN EACH OF EIGHT REPRESENTATIVE SYSTEMS

Year	Kilowatts of substation equipment per substation employee							
	System No. 2	System No. 3	System No. 4	System No. 5	System No. 6	System No. 7	System No. 8	System No. 10
1912		595						
1913		597						
1914		683		1,241				
1915		801		1,297				
1916	1,224	1,030		1,333				
1917	1,614	1,091		1,235				
1918	1,766	1,079		1,604				
1919	1,743	1,106		1,948				
1920	1,823	1,182		1,963				
1921	2,148	1,336		2,039				
1922	2,148	1,486		2,330	2,515			
1923	2,154	1,638		2,465	2,340			
1924	2,700	1,750		3,269	2,221			
1925	2,349	1,798		2,488	3,254	2,288		3,304
1926	2,434	1,986		2,738	3,439	2,447		3,593
1927	2,633	2,128	5,652	2,556	3,136	2,554		3,937
1928	2,635	2,593	5,746	3,089	3,171	2,686		3,603
1929	2,828	2,190	6,196	3,326	3,221	3,015	621,947	3,868
1930	3,037	2,343	7,348	3,462	2,903	3,213	743,203	4,424
1931		2,479	6,540	3,428	3,443	3,402	762,716	5,145
Per cent of increase from earliest to latest year	148	317	16	176	37	33	23	56

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Man-Hour Productivity in the Blast-Furnace Industry in 1929

IN CONNECTION with the Census of Manufactures of 1929 the Bureau of the Census collected data regarding man-hour rates of production for certain industries, including blast furnaces. With the permission of the Bureau of the Census a summary of the information thus obtained regarding blast furnaces is presented in this article. The method of tabulation follows in general the one set forth in the Labor Review of March, 1929 (p. 52).

The data collected covered operations in 1929, and were obtained by incorporating an additional question in the usual census questionnaire which was filled in by the manufacturers themselves. The extra inquiry requested the actual number of man-hours worked during the year by the wage earners, including piece workers as well as time workers but not including salaried officers and salaried employees.

The plants covered in the present study produced 95.8 per cent of the total blast-furnace output in the United States in 1929.

Analysis of the data concerning these plants indicates that efficiency (as measured by man-hour productivity) depends on a number of factors, including size of plant, degree of mechanization, wages paid, etc.; kind of ore handled and character of labor also exert some influence.

The plants with the largest output of pig iron produced more than four times as much per man-hour as did the plants with the smallest output; the wage cost per man-hour was slightly lower in the small plants than in the large plants, but the rate per ton was much higher.

Efficiency, as measured by output per man-hour, is not, however, entirely a matter of the size of the plant. Analysis shows that the plants having the lowest output per man-hour were those paying the lowest hourly wage, while the plants with the highest man-hour output were those paying the highest wages. In the highest-wage plants man-hour production was more than eleven times as great as in the lowest-wage plants. The four highest-wage plants were of only medium size, however, as regards number of employees.

Study of the classification of the plants on the basis of horsepower shows a very close connection between efficiency and the horsepower. The plants with the smallest horsepower had the smallest average output per plant and the smallest output per man-hour, whereas the plants with the greatest horsepower had the largest output per plant and per man-hour and the lowest wage cost per ton. The data would seem to indicate that from the standpoint of efficiency the provision of 100 to 125 horsepower per wage earner gave the best results.

Scope of Study

USABLE reports as to man-hours worked were secured from 86, or 81.9 per cent, of the 105 blast-furnace establishments¹ operating in the United States in 1929.² These produced 40,710,666 tons, or 95.8

¹ By the term "establishment" is meant a blast-furnace plant, or the blast-furnace department of a large plant carrying on more than one activity.

² The other 19 plants were included, however, in the general census statistics, the unsatisfactory answers having pertained only to the man-hour inquiry.

per cent, of the 42,486,758 tons produced during the year in the United States.

Table 1 shows (for each of seven States for which figures can be published without permitting identification of individual establishments) the total production in the State and the amount and per cent of the total production reported by the establishments included in the man-hour tabulations.³ The smallest coverage for any one of the four most important States of the industry (Pennsylvania, Ohio, Illinois, and Indiana), which together account for over three-fourths of the total production, is 95.6 per cent, for Ohio. For three of the States, Illinois, Indiana, and Alabama, the total production (that is, every blast-furnace establishment in the State) was covered by the man-hour tabulations.

TABLE 1.—TOTAL PRODUCTION OF PIG IRON, AND PRODUCTION COVERED BY MAN-HOUR TABULATIONS, BY STATES, 1929

State	Rank (based on total pro- duced)	Total pro- duction (long tons)	Production covered by man-hour tabulations		
			Amount (long tons)	Per cent of total production in State	Per cent of total production in States covered
Pennsylvania.....	1	14,535,823	14,212,578	97.8	34.9
Ohio.....	2	9,797,488	9,363,555	95.6	23.0
Illinois.....	3	4,357,905	4,357,905	100.0	10.7
Indiana.....	4	4,277,759	4,277,759	100.0	10.5
New York.....	5	2,707,315	1,976,455	73.0	4.9
Alabama.....	6	2,705,923	2,705,923	100.0	6.6
Michigan.....	8	794,526	753,324	94.8	1.9
Other States ¹	(1)	3,310,019	² 3,063,167	92.5	7.5
United States.....		42,486,758	40,710,666	95.8	100.0

¹ Maryland, rank of 7; West Virginia, Colorado, Minnesota, Kentucky, Massachusetts, Utah, Tennessee, and Virginia, ranks of 9 to 16, are combined to avoid revealing data for individual establishments.

² Does not include any establishment in Virginia.

Factors which materially affect the productivity of a plant are the types of equipment, methods of operation, quality of ore, kind of product, and method of delivery. These exert an influence upon the amount of labor necessary, and, therefore, upon the number of wage earners employed. The tabulations cover only three plants engaged in the production of charcoal iron aggregating less than 100,000 tons, the remaining tonnage having been reported as produced by coke.

The method of delivery or of casting of the iron is very important, and the establishments included in the man-hour tabulations were representative of the industry in this respect. Table 2 shows the

³ The total production (1,776,092 tons) omitted from the man-hour tabulations was produced in plants not representative of the industry in every respect. Three factors—geographical location, method of delivery, and size of furnaces—are of material significance in this connection. As shown in Table 1, the tonnage omitted is not uniformly distributed geographically, but in regard to method of delivery, the tonnage omitted was representative of the industry. Only 85,015 tons, or 4.8 per cent, were delivered by methods other than machine-cast or delivered molten in contrast with 4.0 per cent for the entire industry. In respect to size of furnaces and number of furnaces per plant, the plants excluded from the man-hour tabulations were somewhat smaller than normal. They probably were therefore somewhat less efficient than the average for the industry. The average capacity of the 273 furnaces reported by the entire industry was 543 tons, but that for the 23 furnaces in the 19 plants excluded from the tabulations was only 334 tons; 4 furnaces had less than 100 tons capacity, and 5 had capacities of 500 tons or more, the largest being 600 tons. Only 2 of the 19 establishments had more than one furnace each, 1 having two furnaces and 1 having four. The average number of furnaces per establishment excluded was, therefore, only 1.2 as compared with 2.6 for the entire industry.

number of establishments and the tonnage produced by each of four methods of delivery or of casting for the industry as a whole and for the establishments included in the man-hour tabulations.

TABLE 2.—PRODUCTION OF PIG IRON IN THE UNITED STATES, BY METHOD OF DELIVERY OR CASTING, 1929

Method	All establishments in the industry			Establishments included in man-hour tabulations			Establishments omitted from man-hour tabulations		
	Number of establishments	Long tons produced	Per cent	Number of establishments	Long tons produced	Per cent	Number of establishments	Long tons produced	Per cent
Delivered molten.....	¹ 58	29,463,804	69.3	¹ 56	29,151,448	71.6	¹ 4	312,356	17.6
Machine cast.....	¹ 88	11,332,479	26.7	¹ 73	9,953,758	24.5	¹ 14	1,378,721	77.6
Sand cast and chill cast.....	¹ 27	1,651,535	3.9	¹ 21	1,566,875	3.8	¹ 5	84,660	4.8
Direct castings.....	¹ 35	38,940	.1	¹ 32	38,585	.1	¹ 3	355	(?)
Total.....	105	42,486,758	100.0	86	40,710,666	100.0	19	1,776,092	100.0

¹ Involves some duplication, since number of establishments reported two or more methods.

² Less than one-tenth of 1 per cent.

The method of delivery or of casting within the individual States is not appreciably different from that for the United States as a whole. In Pennsylvania, the quantity produced by all the blast furnaces in the State by methods other than delivered-molten or as machine-cast was 3.3 per cent, and in Ohio, second in rank, 0.3 per cent; for the other 14 States, with a total production of 18,153,447 tons, the quantity delivered by methods other than by these two methods was 1,177,040 tons, or 6.5 per cent.

Trend of Productivity

Productivity, by States

TABLE 3 shows averages of output, wages, and horsepower in the different States, arranged in the order of their importance as regards average output per establishment. The "wages" item in Table 3 is based on the aggregate amount of compensation paid during the year to all the wage earners of the establishment. This, divided by the year's output, gives the wages per ton. The "wages per man-hour" is obtained by dividing the aggregate wages by the total number of man-hours. While rates of wages are not here considered it is known that these differ from plant to plant. The "horsepower" is the sum of the rated capacity of the prime movers plus that of the electric motors driven by purchased energy. The power of the electric motors run by energy generated in the establishment is omitted, since to include such motors would result in a duplication of some of the power originating with the prime movers proper.

TABLE 3.—AVERAGE WAGES AND AVERAGE HORSEPOWER PER UNIT OF OUTPUT AND PER MAN-HOUR, IN 86 BLAST-FURNACE ESTABLISHMENTS, BY STATES, 1929

State	Number of establishments	Average number of wage earners	Average output per establishment (in long tons)	Output (tons) per man-hour	Wages		Average horsepower (rated capacity) ¹	Horsepower ¹	
					Per ton of output	Per man-hour		Per 100 tons of output	Per 1,000 man-hours
Indiana.....	3	524	1,425,920	0.920	\$0.610	\$0.561	109,073	7.65	70.4
Illinois.....	6	425	726,318	.555	.969	.538	22,696	3.12	17.3
Pennsylvania.....	27	293	526,392	.610	.944	.576	23,817	4.52	27.6
Ohio.....	21	262	445,884	.582	1.123	.654	31,094	6.97	40.6
New York.....	5	185	395,291	.672	.786	.528	17,438	4.41	29.6
Other States ²	10	146	306,317	.677	.790	.535	11,631	3.80	25.7
Alabama.....	10	240	270,592	.351	1.071	.375	12,248	4.53	15.9
Michigan.....	4	196	188,331	.366	1.845	.675	5,161	2.74	10.0
United States.....	86	269	473,380	.589	.959	.564	24,489	5.17	30.5

¹ Horsepower of prime movers plus that of electric motors driven by purchased energy.

² Colorado, Kentucky, Maryland, Massachusetts, Minnesota, and Utah, 1 establishment each; Tennessee and West Virginia, 2 establishments each.

Ranking the States in the order of output per establishment, as is done in Table 3, reveals a large degree of correlation between the data shown in the several columns of the table. Indiana ranks first as regards largest output per plant, number of wage earners per plant, output per man-hour, aggregate horsepower rating, horsepower per 100 tons of output and per 1,000 man-hours; this State shows the smallest wage per ton of output. Michigan, on the other hand, ranks last as regards output per plant, horsepower rating, and the horsepower per 100 tons of output and per 1,000 man-hours; and in only one State (Alabama) is the output per man-hour less than in Michigan. Michigan also shows the highest wage per ton of output. Unusual conditions in this State, however, partly offset the very high rate per ton found there: Part of the production is charcoal pig iron, a product requiring more hand labor than is required for the average product of the industry; hourly wages are high; and the number of full-time working hours per week for the wage earners (especially for one plant) is somewhat lower than the average for the entire industry. The wages per ton for the charcoal iron were considerably larger than those for the coke iron, the former being in excess of \$2.50 and the latter somewhat under the figure of \$1.845 for the four tabulated plants in this State.

The amounts in the column for wages per ton of output tend to increase in the order of listing, and in opposition to the trend shown by the figures given in the several columns on output and horsepower.

As regards the cause of the relatively greater efficiency (measured by the increased output per man-hour) of those plants in the States listed at the top of the table, as compared with those in the States listed at the bottom of the table, it is evident that high or low hourly wages are insufficient as an explanation of the degree of efficiency found.

Michigan pays the highest hourly wages (67.5 cents) shown for the States listed, and the wages per ton of output (\$1.845) are also the highest. Although it might be expected that these high wages would command the services of an efficient type of labor, the table shows that the output per man-hour in this State (0.366 ton) is the next to the lowest of all the States listed. On the other hand, the plants in Alabama pay the lowest hourly wage (37.5 cents) of all the States listed, but the rate per ton of output is quite high (\$1.071), being exceeded by only two other States (Michigan and Ohio). Only two

other States in the list have a smaller average horsepower per plant than Alabama (12,248). Apparently, the low hourly wage in Alabama is offset by the very low productivity per man-hour.

It is to be concluded from the above not that the labor in Michigan, for instance, is inefficient, but that the efficiency of blast furnaces is controlled more by factors other than the character of the labor or the wages paid. The inference is strong that the amount of available horsepower is closely associated with efficiency of operation. The degree of mechanization of the establishments is quite important, as is also the character of the ore.

Productivity, by Size of Plant

Table 4 classifies the 86 establishments according to number of wage earners employed, output in tons of pig iron produced, output per man-hour, average wages per man-hour, horsepower, and horsepower per wage earner. In each case the figures are averages per establishment.

TABLE 4.—AVERAGE WAGES AND AVERAGE HORSEPOWER PER UNIT OF OUTPUT AND PER MAN-HOUR, IN 86 BLAST-FURNACE ESTABLISHMENTS CLASSIFIED ACCORDING TO SIZE, 1929

Item	Number of establishments	Average number of wage earners	Average output per establishment (in long tons)	Average output (tons) per man-hour	Wages		Average horsepower (rated capacity) ¹	Horsepower ¹	
					Per ton of output	Per man-hour		Per 100 tons of output	Per 1,000 man-hours
Number of wage earners employed:									
Under 100.....	17	80	110,264	0.399	\$0.989	\$0.394	3,542	3.21	12.8
100 to 199.....	28	142	262,356	.603	.944	.570	12,923	4.93	29.7
200 to 299.....	16	243	371,235	.493	1.040	.512	15,478	4.17	20.5
300 to 399.....	8	373	699,154	.632	.965	.610	34,683	4.96	31.4
400 to 499.....	6	443	796,005	.655	.957	.627	30,832	3.87	25.4
500 to 599.....	3	544	993,105	.573	.941	.539	53,033	5.34	30.6
600 and over.....	8	826	1,525,235	.646	.925	.598	101,848	6.68	43.2
Tons of pig iron produced:									
Under 100,000.....	13	111	63,544	.172	2.069	.357	3,053	4.80	8.3
100,000 to 199,999.....	17	116	149,220	.388	1.328	.515	4,994	3.35	13.0
200,000 to 299,999.....	11	164	258,754	.498	1.063	.530	16,527	6.39	31.8
300,000 to 399,999.....	12	267	362,355	.464	1.255	.583	14,833	4.09	19.0
400,000 to 499,999.....	10	237	450,829	.622	.950	.591	21,115	4.68	29.1
500,000 to 999,999.....	11	358	735,689	.736	.853	.628	33,040	4.49	33.1
1,000,000 and over.....	12	697	1,462,702	.716	.814	.583	87,256	5.97	42.7
Output per man-hour:									
Under 0.200 ton.....	9	186	92,814	.145	2.554	.369	3,269	3.52	5.1
0.200 to 0.399 ton.....	22	207	239,113	.341	1.440	.492	12,226	5.11	17.5
0.400 to 0.599 ton.....	18	273	391,525	.504	1.279	.644	20,115	5.14	25.9
0.600 to 0.799 ton.....	17	346	662,666	.665	.872	.580	38,293	5.78	38.4
0.800 to 0.999 ton.....	13	355	909,230	.869	.665	.578	46,800	5.15	44.7
1.000 ton and over.....	7	208	640,298	1.313	.582	.765	26,601	4.15	54.5
Wages per man-hour:									
Under 30.0 cents.....	5	106	37,914	.091	2.178	.198	1,273	3.36	3.0
30 to 39.9 cents.....	8	131	148,408	.309	1.150	.355	6,373	4.29	13.3
40 to 49.9 cents.....	15	217	363,980	.512	.871	.446	19,064	5.24	26.8
50 to 59.9 cents.....	31	322	609,799	.611	.901	.551	29,849	4.89	29.9
60 to 69.9 cents.....	14	301	504,563	.591	1.075	.636	26,481	5.25	31.0
70 to 79.9 cents.....	9	293	587,983	.743	.994	.738	38,425	6.54	48.5
80 cents and over.....	4	353	653,652	1.026	.991	1.016	30,215	4.62	47.4
Horsepower (rated capacity): ¹									
Under 1,000.....	9	106	137,670	.387	.904	.350	434	.32	1.2
1,000 to 4,999.....	16	122	145,641	.363	1.581	.501	3,007	2.06	7.5
5,000 to 9,999.....	10	178	214,436	.459	1.231	.565	7,422	3.46	15.9
10,000 to 24,999.....	26	223	259,125	.382	1.473	.563	15,918	6.14	23.5
25,000 to 49,999.....	15	393	845,907	.698	.808	.564	37,274	4.41	30.8
50,000 to 99,999.....	6	628	1,083,147	.617	1.038	.641	68,727	6.35	39.2
100,000 and over.....	4	736	1,618,071	.759	.791	.600	148,618	9.18	69.7
Horsepower ¹ per wage earner:									
Under 25.0.....	21	173	194,600	.379	1.332	.505	2,592	1.33	5.1
25 to 49.9.....	17	242	335,490	.458	1.150	.527	9,722	2.90	13.3
50 to 74.9.....	12	327	515,281	.506	1.102	.557	20,333	3.95	20.0
75 to 99.9.....	11	358	659,171	.623	.934	.582	32,128	4.87	30.4
100 to 124.9.....	6	211	567,217	.911	.620	.564	22,598	3.98	36.3
125 to 149.9.....	5	356	761,573	.843	.852	.718	50,592	6.64	56.0
150 to 174.9.....	6	284	678,282	.800	.707	.566	47,387	6.99	55.9
175 and over.....	8	344	775,702	.712	.837	.596	77,009	9.93	70.7

¹ Horsepower of prime movers plus that of electric motors driven by purchased energy.

Number of wage earners employed.—As shown in the first section of the table, the output per establishment ranged from 110,264 tons in the plants with fewer than 100 workers to 1,525,235 tons in those with 600 wage earners or more. In all the columns of the first section of the table (except the two on wages) the figures show a tendency to increase with the increase in size of plant, showing that efficiency of operation seems to accompany increase in number of wage earners employed, output, and available horsepower.

Quantity of product.—The second section of the table, classifying the 86 selected establishments according to quantity of pig iron produced, shows that the smallest plants, with an average of 111 wage earners each, had a man-hour production of 0.172 ton, whereas the largest plants, with an average of 697 wage earners each, had a man-hour production of 0.716 ton; in other words, the large plants produced over four times as much for each man-hour of labor as did the small plants. The plants in the group producing from 500,000 to 999,999 tons per year turned out a still larger production (0.736 ton per man-hour) than those producing 1,000,000 tons and over.

The wage cost per man-hour was slightly lower in the small plants than in the large plants, but the wages per ton of output were much higher for the small plants than for the large ones. It is probable that the small plants pay slightly smaller hourly wages than the large plants. The latter are, in general, more highly mechanized than the small ones and may therefore require a larger percentage of skilled wage earners than the small plants with little mechanization. The higher rates of these skilled workers would, in turn, bring up the average wage cost in the plant.

Output per man-hour.—The above conclusion is supported by the third section of the table in which the establishments are classified according to the production per man-hour. Here it is shown that the wage cost per man-hour ranged from 36.9 cents for the plants producing less than 0.2 ton per man-hour to 76.5 cents for those producing 1 ton or more per man-hour; the corresponding wage cost per ton of output decreased from \$2.554 to only 58.2 cents. This is especially significant when considered in connection with the average number of wage earners per plant and the output per man-hour. It is evident that efficiency, as measured by output per man-hour, is not entirely a matter of size of plant; the 9 least efficient plants averaged 186 wage earners each, and the 7 most efficient ones averaged only 208 wage earners each; and yet the productivity of the latter (1.313 tons per man-hour) is over nine times that of the former (0.145 ton per man-hour).

It is also shown that the least efficient class of plants, as measured by output per man-hour, pays the lowest hourly wage (36.9 cents) and the highest wage per ton of output (\$2.554), while the most efficient class pays the highest hourly wage (76.5 cents) and the lowest wage per ton of output (58.2 cents). Obviously, there is a very large inverse correlation between these two sets of figures.

Wages per man-hour.—The fourth section of Table 4 shows that the output per man-hour of labor is much larger in those plants paying 80 cents and over per hour than in those plants paying less than 30 cents per hour. For each man-hour of labor, the plants paying the highest wage per hour produced 1.026 tons of iron, or over 11 times as much as those paying the lowest wage. The cause of this large range

in efficiency is an important economic problem. It can not be attributed to differences in geographic location, with consequent varying rates of pay and efficiency of labor, for the 5 plants paying under 30 cents per hour and producing an average of only 0.091 ton per man-hour are situated in four different States. They are all antiquated plants, adjacent to ore sources, and with an average horsepower less than one-fourth as great as that of any other class. It is probable, however, that their capital investment and overhead expenses are both small, and these factors enable them to continue operation, despite their inefficiency.

The four establishments paying 80 cents or more per hour, and producing 1.026 tons per man-hour, are not the largest plants covered by this study; the wage earners employed by them averaged only 353 per plant, and their production only 653,652 tons each. The eight largest plants studied (as shown by the first section of the table) had an average of 826 wage earners each and produced 1,525,235 tons of output each; their average output per man-hour was only 0.646 ton. The plants with the largest actual production (as shown by the second section of the table) had an output per man-hour of only 0.716 ton. This shows again that plants of only medium or small size can be as efficient as some very large ones.

To the question of whether efficiency increased as rapidly as did the hourly wage, the answer is in the affirmative. For the class paying under 30 cents per hour the average hourly wage was 19.8 cents, and for those plants paying over 80 cents per hour the average hourly wage was \$1.016—five and one-tenth times as much; the output per man-hour in the latter class, however, was more than eleven times that of the former. For these 9 plants (5 in the lowest class and 4 in the highest), therefore, the increase in efficiency was over twice as rapid as the increase in average hourly wage. This rate is not maintained by the other classes. Consider the second and sixth groups of plants instead of the first and seventh. For the second group, with 8 plants employing an average of 131 wage earners each, the average hourly wage was 35.5 cents and the production was 0.309 ton per man-hour, whereas for the sixth class, with 9 plants employing 293 wage earners each, the average hourly wage was 73.8 cents and the production was 0.743 ton per man-hour. The average hourly wage of the sixth group was, therefore, two and one-tenth times that of the second group, and the production two and four-tenths times. The increase in efficiency was therefore only slightly larger than the increase in the average hourly wage.

Horsepower.—The fifth and sixth sections of Table 4 classify the establishments according to aggregate horsepower rating and horsepower per wage earner employed. The data on aggregate horsepower are very similar to those based on number of wage earners employed, i. e., the plants with smallest average horsepower showed the smallest average output (137,670 tons) and the smallest output per man-hour (0.387 ton), whereas the plants with largest horsepower showed the largest output (1,618,071 tons), the largest output per man-hour (0.759 ton), and the lowest average wage cost per ton of output (79.1 cents).

The sixth section of Table 4, based upon horsepower per wage earner, shows (1) that the plants in the class having the largest horsepower per wage earner (175 and over) are not the largest plants in the industry as measured by number of employees; and (2) that from the

standpoint of efficiency, 100 to 125 horsepower per wage earner is perhaps the optimum amount. The latter is indicated by the fact that the output per man-hour is very small (0.379 ton) for the plants with least horsepower per wage earner (under 25), but increases rapidly, with the increase in horsepower, to a maximum of 0.911 ton, in the class having 100 to 124.9 horsepower per wage earner; it shows a distinct downward trend beyond this point, the plants in the group with the largest horsepower per employee having man-hour output of only 0.712 ton, or only 78 per cent of the maximum.

The wages per ton of output show the same trend but not so distinctly. Starting with \$1.332 for the smallest class of plants (with less than 25 horsepower per wage earner), the wage per ton of output decreases rapidly as the horsepower increases, reaching the minimum of 62 cents, in the class having 100 to 124.9 horsepower per wage earner (i. e., the same class that showed the maximum output per man-hour). From this point onward there seems to be an upward trend in the wages per ton of output, though this is somewhat masked by irregularities in the figures.

EMPLOYMENT CONDITIONS AND UNEMPLOYMENT RELIEF

Report of Senate Committee on Unemployment Insurance

A RESOLUTION to investigate the subject of unemployment-insurance systems in the United States and foreign countries was adopted by the United States Senate, February 28, 1931. The resolution provided for a general study of insurance systems in private use in the United States and those in use by foreign governments, with a view to determining the manner in which such systems were instituted and are now being operated; the cost involved and the results achieved; the relief, if any, afforded by each such system during the economic depression of 1930; the condition of each system on July 1, 1931, with particular reference to the effects upon it of the economic depression of 1930; and the relative State, Federal, or private responsibility in connection with any such system. The members of the committee were: The Hon. Felix Hebert (chairman), Hon. Otis F. Glenn, and Hon. Robert F. Wagner. Numerous hearings were held by the committee, at which witnesses representing the various trends of thought on the subject appeared, and in addition the Bureau of Labor Statistics made for the committee a study of the results of the operations of the various systems in this country and in foreign countries.

The following excerpts from the committee's report sum up the results of the study by the committee and the conclusions reached by it.

"The committee has observed," it is stated, "that in the consideration of the problems of unemployment relief there are two schools of thought; one, that their solution should be left to the employers of labor, and the other, that they are to be solved by compulsion through the agency of Government, either National or State; one, that we should adhere to the fundamental ideals based upon the willing cooperation of intelligent men; the other, that we should adopt a system of compulsion by legislative enactment.

"If we were to summarize the contrasting views of the two schools of thought upon the subject of unemployment insurance and the stabilization of industry, we should say that the views of those who stress the social side of the problem might be expressed as follows:

"1. Most of the unemployment is due to social, not industrial, causes and the industrialist should not be called upon to assume the risks. Society should insure the worker against it, and, therefore, funds for the relief of unemployment should be contributed not by employees but by the State and the Federal Government.

"2. The indirect effects of social-insurance service on industrial efficiency and mobility are more important than the direct burden which it imposes.

"3. Inasmuch as the causes of unemployment are national in character, it should be relieved by national legislation.

"On the other hand, what might be called the employer group has reached the following conclusions:

"1. American industry should be given an opportunity to work out its own unemployment problems unhampered by Government intervention.

"2. After a study of so-called unemployment-insurance systems in operation in foreign countries, they conclude that the use of the term 'insurance' is a misnomer, since the risk of unemployment can not be measured or predicted on the basis of actuarial data.

"3. Some plan might be successfully operated if kept within certain specified limits as to coverage, but to keep it so is not possible, as shown by the experience of other countries.

"4. Any compulsory plan will be subjected to constant and irresistible pressure to increase the benefits, extend the limits of coverage, relax the safeguards, and generally expand the system to a general relief scheme supported by public funds and paid for by taxation.

* * * * *

"The view that employers must be held responsible to a considerable degree for the regularization of employment in their plants has become more current. Better knowledge of the problems of scientific management has impressed business executives with the cost involved in idle plants and labor force, and together with more humane considerations, has stimulated them to conscious effort for continuity of production and employment.

"Surveys of unemployment relations in America have shown the sporadic character of the development. In times of depression and consequent unemployment many schemes for the relief of the unemployed come to life. In times of activity even those who have advocated legislation and the creation of various agencies to assist those in need appear to lose interest and the discussion of the problem ceases.

* * * * *

"The experience of other countries with unemployment insurance proves conclusively that it is not a solution of unemployment in all its phases. Indeed, the proposition has been advanced by some students of the subject that the risk of unemployment is not a suitable one for insurance. Unemployment insurance, like other forms of coverage, in the limited field where it can apply will require the accumulation of reserves. That is a basic condition of insurance. Inasmuch as unemployment is not predictable, it follows that there will be not a little difficulty in finding a basis from which to proceed to the accumulation of the necessary reserves. The studies of the actuaries have not brought them to any final conclusions. Such studies have demonstrated that unemployment insurance as insurance will not relieve those conditions which its advocates claim, and in no event will it prove a major factor in the solution of the general problem. That the knowledge of the subject now available is inadequate upon which to base a sound and practical scheme is conclusive, the experience of the Governments of England and Germany fully demonstrate.

* * * * *

"There is no difference of opinion among the members of your committee or, we believe, among the citizens of this country generally, that distress and suffering and want caused by unemployment in a depression such as the one through which we are now passing, or as the result of any depression, must be relieved; whatever form that relief may take, whether through unemployment reserves or through stabilization of industry or some system of savings so that the employee, when out of a job will nevertheless have a source of income to support himself and his dependents, at least for a time, we must provide some measure of relief if we are to maintain that standard of living upon which we pride ourselves in the United States. There is general agreement among us as to the ends to be attained, though there may be a difference as to the means whereby to attain them.

"It is generally conceded now that any system of Federal unemployment insurance would be impractical if not undesirable. Your committee have reached that conclusion. We have observed the operation of such systems in other countries, particularly in those countries where industrial conditions are not unlike those in the United States. But we see problems to be solved if we shall establish such a system under Federal control here which have not arisen elsewhere. * * *

"Again, there is the difficulty of reaching a determination as to the extent of coverage to be provided; that is to say, whether the system shall be limited to certain classes of industries, or whether it shall include all workers in every line of activity. The difficulty here is manifest when we realize that one-third of all those who are gainfully employed in the United States are engaged in agriculture. To overlook that large body of our citizens in any scheme of unemployment relief would mean the imposition of taxes upon them without any resulting benefits, and the preferment of citizens engaged in other work. That the application of such a scheme to industry, while leaving out agriculture would be inequitable, needs no argument.

"A further objection to the maintenance of a Federal system of unemployment reserves is the difficulty of fixing rates of contributions and unemployment benefits to the varying conditions in various parts of the country. We can readily visualize a situation where, for instance, the rate of wages and the working conditions in one industry in one locality are far different than in a like industry in other parts of the country. Again, the living conditions in the large industrial centers are not the same as they are in sparsely settled communities, and these differences must, of necessity, be taken into account. A further objection comes to our minds when we realize the enormity of the problem to be solved. It will readily be seen that the imposition of such a function upon the Federal Government will bring into being a bureaucracy extending its activities all over this country such as we have never known. No one has yet hazarded a guess as to the extent to which we must go both in the way of supervision and expense if the Federal Government shall launch into such an experiment.

"In the consideration of the possibility of governmental action, particularly Federal legislation to relieve unemployment, we find there is perhaps a constitutional objection.

"The powers of Congress are limited to particular fields, and the police power to deal with such a subject rests with the States, except

in the Territories and in the District of Columbia, where the Federal Government exercises exclusive sovereignty.

"Congress has no power to regulate the relations of employers and employees except where such power is conferred by the Constitution.

* * * * *

"Having reached the conclusion that some form of relief of unemployment, and the solution of the many problems attendant upon it, is desirable if not imperative, and having become convinced that such a solution may not be had through Federal action, there remain but two avenues by which the problem can be approached. We must have recourse either to the establishment of reserves compulsorily maintained by industries, to which employees may contribute, in pursuance of State legislation, or voluntary reserves maintained by the industries themselves with the cooperation of their employees.

"Upon neither of these alternatives can Congress legislate effectively in our opinion. It can only recommend.

"Having in mind the attitude of some of the large employers of labor in establishing their own reserves, and that this method, after all, would perhaps prove the most satisfactory, nevertheless, we are not unmindful of the fact that relatively few employers of labor have made such provisions for their employees to guard against the inevitable in times of depression and lack of employment. The ideal solution, to our minds, would be the establishment of reserves by private industries in conjunction with their employees, each plant employer taking care of his own employees, at the same time fostering and encouraging the maintenance of those systems of unemployment benefits which the workers themselves have maintained for many years. But, again, the experience of the past demonstrates, to our satisfaction at least, that industry will not, at least for a long time, if ever, take upon itself without compulsion the establishment of such reserves. Therefore, we conclude that ultimately, at least, the States should formulate some program.

"It may well be advantageous to all concerned if some form of legislation can be enacted in the several States fixing a period during which industry can formulate plans for the establishment of proper reserves. What that period of waiting should be we are not prepared to say, but we rather think it should be left to the well-considered judgment of those in charge of governmental affairs and those industries in the several States. If at the end of such a period of waiting industry has not responded to the demand which is felt now, and which perhaps will continue to arrest our attention, then the only remaining solution will be the enactment by the States of compulsory unemployment insurance laws, or, at any rate, the maintenance of reserves for unemployment benefits.

"We shall not attempt to analyze the many plans which were suggested to us in the course of our hearings. They are available in the printed reports of the testimony which was presented during our investigation. The most practical of them might be summarized as follows:

"1. The maintenance of reserves by employers without fixing the amount of the contributions thereto.

"2. Voluntary contributions from employees.

"3. Reserves to be set up for each employee individually to meet his own personal risk, all to be in the control of trustees to be chosen

by employers and employees or, if preferred, to be chosen by State officials or by officials of the Federal Government.

"4. Fund to be registered with some Government authority, and be wholly independent of any control by the employer or the employee, so that in case of bankruptcy or failure of the employer the fund would not be subject to depreciation, but remain intact.

"5. Providing a very considerable degree of flexibility in the administration of such funds, by permitting trustees to shorten or lengthen the so-called waiting period, increasing or reducing the allowance to the unemployed as the conditions of the fund, or the exigencies of the occasion might require, and limiting, if need be, the period during which benefits shall be paid.

"6. Workingmen to have a right of review of disputed cases.

"7. Whenever such funds shall be established and maintained in a way satisfactory to the Federal Government, then credit is to be allowed to employers as a deduction from income in computing Federal taxes of some proportion of the contributions.

"We have already outlined some of the objections which to us are apparent and which have led us to the conclusion that the subject of unemployment insurance is not within the sphere of congressional action. We repeat that any system of Federal unemployment insurance, even though it were found to be within the limitations of our fundamental law, would be inadvisable, and would give rise to problems of far greater significance in their implications than those we are endeavoring to solve.

"While we have expressed the opinion that the several States may find compelling reasons for requiring the maintenance of some system of unemployment insurance by industry, here again, in our judgment, the States themselves, if they should lend their credit to it, would be confronted with very much the same problems as would be the Federal Government, though of a lesser degree, if they shall at any time hereafter, without more experience than is now available, launch out upon such an undertaking. We observe a fundamental difference between unemployment reserves compulsorily maintained by individual plants in industry and to which employees might contribute, and any system that might be established by the States themselves and to which they might be expected to lend their credit. In the one instance the plan depends for its success upon the solution of problems arising in each industrial plant or other individual activity. In the other it is the sum total of all these which aggravates the situation and renders a solution so difficult.

"Individual systems will bring into play the forces of self-interest and self-help and, it is natural to assume, some degree of cooperation. There will at least be an incentive for lessening the need of contributions which in some measure would affect the cost of production, whereas, in State-maintained systems, experience demonstrates there is or has been no such incentive. We make these observations, however, without intending to impinge upon the rights or to assume the attitude of counselors of the sovereign States, realizing these are questions wholly within their power to consider and to resolve in such manner as they shall deem advisable.

"Having reached the conclusion that some form of reserves for the relief of the workers of the country should be provided by individual employers, with the possible cooperation of employees, and not by

the Federal Government or by the States, yet the Federal Government as well as the States may well consider it to be not without the scope of their powers or of their obligations to their citizens to contribute in some measure to the removal of difficulties which exist and which may recur. We, therefore, recommend that the Federal Government contribute to such systems of private unemployment reserves to the extent of permitting employers who maintain them to deduct some portion, if not all, of the contributions thereto out of their income for tax purposes, just as they are now permitted to deduct as a part of the cost of doing business, all sums paid for insurance against the risks of workmen's compensation and other forms of insurance coverage.

"The effect of the allowance of such credits will in a measure equalize the difference in the cost of maintaining such reserves among employers of labor in the States which require them as against employers in those States where they may not be obligatory.

"In the hope of minimizing as far as possible the advantage of the employer who refuses to recognize any responsibility for unemployment, and whose State does not require that he do so, we recommend that this entire subject be given consideration and study by the governors' conference at its future meetings, to the end that uniformity may be established in the several States.

"In their study of the subject, it is urged that the governors' conference consider the advisability of enacting some legislation which will authorize the already existing insurance companies to assume risks of unemployment, subject to such regulations and safeguards as the legislatures of the several States may see fit to impose.

"The obstacles to be overcome in our endeavors to find a solution of the questions of unemployment, its causes and their removal, offer a challenge to our most earnest and unselfish cooperation. The observations made herein and in the testimony taken in the course of our hearings will, it is hoped, assist in reaching some definite and sound conclusion."

Report of Senator Wagner

THE views of Mr. Wagner, minority member of the committee, were presented in a separate report and were summed up as follows:

"1. The evil consequences of unemployment can, and should be, mitigated by the establishment of unemployment insurance or wage reserves.

"2. Unemployment insurance or wage reserves, to be successful, should be inaugurated under compulsory State legislation and be supervised by State authority.

"3. The Federal Government should encourage State action by (a) cooperating with the States in the establishment of a nation-wide employment service, and (b) by allowing employers to deduct from income tax a portion of their payments into unemployment reserves or toward unemployment insurance.

"4. Every system of unemployment insurance or reserves should be organized to provide incentives to the stabilization of employment.

"5. The insurance or wage reserve system should be built on a plan financially and actuarially sound so that the premiums paid into the fund shall be sufficient to meet the obligations of the fund.

"6. Compulsory unemployment insurance eliminates the competitive advantage of the employer who refuses to recognize his business responsibility for unemployment.

"7. Compulsory unemployment insurance preserves the mobility of the worker and his freedom of action in attempting to improve his economic position.

"8. Unemployment insurance will beneficially affect not only the workers but agriculture, industry, and trade; all alike profit from sustained purchasing power.

"9. Sound business and good conscience both demand that, in dealing with unemployment, we abandon the methods of poor relief, with its ballyhoo, its inadequacy, inequality, and uncertainty, which are a drain on the sympathy of the giver and a strain on the character of the taker. Let us, like civilized men and women, organize intelligently to prepare to-day for the exigencies of the future."

Railway Labor's Plan for Federal Credit to Unemployed

THE extension of Federal emergency credit to unemployed heads of families to purchase the necessities of life is advocated by the Railway Labor Executives' Association in a plan recently made public.

The principal proposals of this new scheme for dealing with the present industrial situation are given below:

1. The United States Exchange Corporation would be created which would function in a manner similar to the United States Finance Corporation but for the purpose of placing credit behind buying power instead of behind productive power.

The corporation would be managed by a board of directors and an advisory council representing all interests in the chief economic activities of the United States.

2. The first task of this corporation would be to conduct, within 30 days, an emergency survey of the present demands upon essential industries for the necessities of life which, as a result of lack of buying power, are not being met. This would reveal the character and volume of purchases which would result after the establishment of credit for jobless household heads, and the maximum expansion of employment which would follow from such an extension of buying power.

3. On the basis of this investigation the corporation would make arrangements to furnish credits to cover necessary purchases for six months to unemployed household heads in amounts of not more than \$300 for an individual and \$100 additional for each dependent, but not to exceed \$500 for each head of a household.

4. The corporation would license producers, distributors, and transporters who would enter into an agreement to accept its credit certificates at their face value and comply with the regulations regarding the terms and conditions for purchasing and for producing goods and services. All purchases on credits would be made through these agencies.

5. These licensees would also be required to enter into an agreement (1) not to reduce wage scales below those in effect June 1, 1932, and

(2) to comply with other regulations in order to guarantee the furnishing of goods and services under proper conditions and at reasonable prices.

6. Applicants would obtain credit by signing notes to be repaid on or before 10 years after date, with interest at the rate of 1 per cent for the first year, 2 per cent for the second year, 3 per cent for the third year, and 4 per cent thereafter. Payments for goods would be made by such notes "accompanied by corresponding credit certificates signed by local agents" of the corporation. Credits would be allotted to States in accordance with either their population or the need for relief.

7. During the period the corporation is in existence borrowers from the corporation who obtain employment must agree to have their employers deduct 10 per cent of their wages to be applied on their debt to the corporation until it is paid. Employers would be required to make these deductions.

8. The corporation would be empowered to make available credits for licensed producers to enable them to employ additional workers.

9. Authority would be given the corporation to issue notes, debentures, and bonds of an amount not to exceed five times the corporation's original capital, \$500,000,000, which would provide a revolving fund of about \$3,000,000,000.

10. The corporation would be empowered to make loans to railroads and other essential undertakings, in order to finance deferred maintenance of present properties required to meet a future demand for necessary goods or services, the aggregate amount of such loans not to be more than \$250,000,000. This would, it is estimated, promote the prompt employment of several hundred thousand men.

11. In case State or municipal relief agencies request credits in order to meet requirements for charitable relief, after other sources of relief funds are exhausted, credits could be extended on the notes of such State or municipal agencies; the total amount of such credits not to exceed \$250,000,000, provided the credit facilities of the United States Exchange Corporation have not been exhausted.

Congressional Bills

SENATOR Costigan, on July 1, 1932, introduced a bill (S. 4947) embodying the above proposal. A similar measure (H. R. 12885) was introduced in the House on the same day by Representative LaGuardia.

Results of American Legion Drive for Employment

THE American Legion reports success in a drive to place 1,000,000 persons in employment. The Legion's announcement was made shortly after July 1, 1932, the date set for closing the campaign to find jobs, and it was then proposed to make new plans to increase employment. The campaign was begun on February 15, 1932, by the American Legion, the American Federation of Labor, the Association of National Advertisers, and the Legion Auxiliary, in cooperation with the United States Employment Service.

Placements effected numbered something in excess of 1,000,000, of which number 79,427 are credited to New York, 71,608 to California, and 67,133 to Illinois. In all, 3,177 communities took an active part in the campaign and \$51,931,843 was raised for made-work programs. In giving out the results of the campaign no statement was made as to the duration of the jobs obtained.

Employment Measures Adopted by New England Manufacturers

IN A brief report entitled "What New England manufacturers are doing to improve earnings in 1932," the industrial committee of the New England Council summarizes information obtained by questionnaire from 490 manufacturers. The report lists 36 different plans and shows the per cent of reporting firms in each specified manufacturing group using the various plans. The measures relating to employment included the adjusting of weekly working hours to the available work, provision of maximum security of employment for a stable force, and the establishment of private reserves for unemployment. The proportion of the reporting firms which have adopted these plans is shown, by manufacturing group, in the following statement compiled from the report.

PER CENT OF NEW ENGLAND MANUFACTURERS, IN VARIOUS MANUFACTURING GROUPS, USING SPECIFIED EMPLOYMENT PLANS

Manufacturing group	Shortening weekly working hours to conform to available work	Provision of maxi- mum security of em- ployment for stable force	Establish- ment of private reserves for unem- ployment	Reports received	
				Num- ber	Per cent of total
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>		
Leather products.....	58	63	26	19	2
Metal products.....	78	65	41	109	13
Paper products.....	64	64	32	47	6
Electrical goods.....	78	94	50	18	2
Textile products.....	66	64	28	97	11
Food products.....	41	78	37	46	5
Machinery.....	74	66	46	50	6
Chemicals.....	44	61	31	36	4
Wood products.....	63	48	20	46	5
Silverware, jewelry, optical goods.....	82	64	59	22	3

Preliminary Recommendations of New York Legislative Committee on Unemployment

THE joint committee appointed in New York to make a study of all the aspects of unemployment presented a preliminary report to the legislature of that State on February 15, 1932.

On the basis of its study the committee concludes that there are three choices open in caring for unemployed workmen: (1) They may be allowed to starve wholesale; (2) they may be supported by social organizations; (3) machinery may be provided to care for them through a system of unemployment reserves. The committee is of the opinion that it would not be feasible to build up sufficient reserves to meet the entire cost of unemployment; it does, however, recom-

mend the establishment of reserves, with further provision that in periods of unusual stress the State shall provide, through public welfare agencies, financial support sufficient to prevent starvation and destruction of morale.

The following measures are recommended:

1. An amendment to the insurance law to authorize the voluntary formation, by employers, of employment benefit reserve systems to which employees may, if they so desire, contribute under the jurisdiction of the superintendent of insurance, and to permit insurance corporations to carry out contracts with such systems.

2. The creation in the executive department division of the budget of a board for the long-range planning of public works.

3. An amendment to the [State] constitution to permit the issuance of short-term bonds for public works in times of depression.

4. Legislation to provide a compensatory refund from franchises or income taxes to employers who adopt an approved plan for an unemployment benefit reserve system.

5. Legislation for the license and control by the State of private fee-charging employment agencies.

6. The collection and compilation by the State of additional statistics covering employment and unemployment comparable to employment data now collected in the fields of manufacture and building construction for trade, retail and wholesale; for transportation in all its important branches; for public utilities; for service industries such as hotels, garages, laundries, etc.; for employment in clerical and accounting work and for "man-hour" data in the fields now covered and those recommended for inclusion here.

7. That if the committee be continued for another year it be authorized to investigate the matter of the regulation of the sale of securities in relation to its possible effect as an overstimulant to business booms.

That the committee be continued until March 1, 1933, for the purpose of further study and development of its general plan as outlined above.

Unemployment in Foreign Countries

THE following table gives detailed monthly statistics of unemployment in foreign countries, as shown in official reports, from June, 1930, to the latest available date.

Country		June, 1930		Latest available date	
United States		1,000,000		1,000,000	
Great Britain		1,000,000		1,000,000	
France		1,000,000		1,000,000	
Germany		1,000,000		1,000,000	
Italy		1,000,000		1,000,000	
Japan		1,000,000		1,000,000	
Canada		1,000,000		1,000,000	
Australia		1,000,000		1,000,000	
New Zealand		1,000,000		1,000,000	
South Africa		1,000,000		1,000,000	
India		1,000,000		1,000,000	
China		1,000,000		1,000,000	
Russia		1,000,000		1,000,000	
Soviet Union		1,000,000		1,000,000	
Poland		1,000,000		1,000,000	
Czechoslovakia		1,000,000		1,000,000	
Yugoslavia		1,000,000		1,000,000	
Greece		1,000,000		1,000,000	
Turkey		1,000,000		1,000,000	
Egypt		1,000,000		1,000,000	
Persia		1,000,000		1,000,000	
Iraq		1,000,000		1,000,000	
Iran		1,000,000		1,000,000	
Afghanistan		1,000,000		1,000,000	
Siam		1,000,000		1,000,000	
Burma		1,000,000		1,000,000	
Ceylon		1,000,000		1,000,000	
Sri Lanka		1,000,000		1,000,000	
Malaya		1,000,000		1,000,000	
Singapore		1,000,000		1,000,000	
Philippines		1,000,000		1,000,000	
Indonesia		1,000,000		1,000,000	
Netherlands East Indies		1,000,000		1,000,000	
British India		1,000,000		1,000,000	
French India		1,000,000		1,000,000	
Dutch East Indies		1,000,000		1,000,000	
Portuguese East Indies		1,000,000		1,000,000	
Spanish East Indies		1,000,000		1,000,000	
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French Congo		1,000,000			

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES¹

Date (end of month)	Australia		Austria	Belgium			
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment insurance societies			
	Number	Per cent		Wholly unemployed		Partially unemployed	
				Number	Per cent	Number	Per cent
1930							
June.....	80,595	18.5	150,075	12,226	1.9	41,336	6.5
July.....	(²)	-----	153,188	15,302	2.4	48,580	7.7
August.....	(²)	-----	156,145	17,747	2.8	51,649	8.2
September.....	90,379	20.5	163,894	23,693	3.8	61,623	9.9
October.....	(²)	-----	192,778	27,322	4.3	54,804	8.5
November.....	(²)	-----	237,745	38,973	6.1	76,043	12.0
December.....	104,951	23.4	294,845	63,585	9.3	117,167	17.0
1931							
January.....	(²)	-----	331,239	77,181	11.1	112,734	16.2
February.....	(²)	-----	334,041	81,750	11.7	121,906	19.4
March.....	113,614	25.8	304,084	81,305	11.3	125,972	17.7
April.....	(²)	-----	246,845	70,377	10.0	110,139	15.6
May.....	(²)	-----	208,852	56,250	7.9	97,755	13.8
June.....	118,424	27.6	191,150	62,642	8.9	101,616	14.4
July.....	(²)	-----	194,364	64,644	9.1	116,747	16.3
August.....	(²)	-----	196,321	70,893	9.9	120,669	16.8
September.....	120,694	28.3	202,130	74,175	10.3	119,433	16.6
October.....	(²)	-----	228,101	82,811	11.3	122,733	16.8
November.....	(²)	-----	273,658	93,487	13.3	134,799	19.2
December.....	118,732	28.0	329,627	128,884	17.0	150,941	21.1
1932							
January.....	(²)	-----	358,114	153,920	20.0	179,560	23.2
February.....	(²)	-----	361,948	168,204	21.3	180,079	22.8
March.....	120,366	28.3	352,444	155,653	19.4	185,267	23.0
April.....	(²)	-----	303,888	152,530	18.8	183,668	22.6
May.....	(²)	-----	271,481	-----	-----	-----	-----
June.....	124,068	30.0	265,049	-----	-----	-----	-----
Date (end of month)	Canada	Czechoslovakia		Danzig (Free City of)	Denmark		
	Per cent of trade-unionists unemployed	Number of unemployed on live register	Trade-union insurance funds—unemployed in receipt of benefit	Number of unemployed registered	Trade-union unemployment funds—unemployed		
			Number		Per cent	Number	Per cent
1930							
June.....	10.6	73,464	37,853	3.4	14,975	24,807	8.7
July.....	9.2	77,309	46,800	4.1	15,330	26,200	9.3
August.....	9.3	88,005	52,694	4.7	15,687	26,232	9.0
September.....	9.4	104,534	57,542	5.3	16,073	27,700	9.0
October.....	10.8	122,379	61,213	5.5	17,307	32,880	11.4
November.....	13.8	155,203	65,904	5.9	20,272	44,200	15.3
December.....	17.0	239,564	93,476	8.3	24,429	71,100	24.6
1931							
January.....	16.0	313,511	104,580	9.5	27,081	70,961	24.2
February.....	15.6	343,972	117,450	10.0	28,192	73,427	26.0
March.....	15.5	339,505	119,350	10.0	27,070	67,725	22.1
April.....	14.9	296,756	107,238	8.9	24,186	45,698	15.3
May.....	16.2	249,686	93,941	7.6	20,686	37,856	12.3
June.....	16.3	220,038	82,534	6.6	19,855	34,030	11.3
July.....	16.2	209,233	82,759	6.6	20,420	36,369	11.8
August.....	15.8	214,520	86,261	6.9	21,509	35,060	11.8
September.....	18.1	228,383	84,660	6.7	22,922	35,871	12.1
October.....	18.3	253,518	88,600	6.9	24,932	47,196	16.0
November.....	18.6	336,874	106,015	8.2	28,966	66,526	22.3
December.....	21.1	480,775	146,325	11.3	32,956	91,216	30.4
1932							
January.....	22.0	583,138	186,308	14.0	34,912	106,464	35.1
February.....	20.6	631,736	197,612	14.8	36,258	112,346	37.3
March.....	20.4	633,907	195,076	14.6	36,481	113,378	37.5
April.....	23.0	555,832	180,456	13.3	33,418	90,704	29.9
May.....	22.1	487,228	-----	-----	31,847	79,931	26.1
June.....	-----	458,287	-----	-----	-----	80,044	25.6

See footnotes at end of table.

EMPLOYMENT CONDITIONS AND UNEMPLOYMENT RELIEF 279

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Estonia	Finland	France	Germany			
	Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered	Trade-unionists		
					Per cent wholly unemployed	Per cent partially unemployed	Number unemployed in receipt of benefit
1930							
June.....	910	3,553	1,019	2,640,681	19.6	12.6	1,834,662
July.....	762	4,026	856	2,765,258	20.5	13.9	1,900,961
August.....	1,039	5,288	964	2,883,000	21.7	14.8	1,947,811
September.....	1,414	7,157	988	3,004,000	22.5	15.1	1,965,348
October.....	3,282	10,279	1,663	3,252,000	23.6	15.4	2,071,730
November.....	5,675	10,740	4,893	3,683,000	26.0	16.1	2,353,980
December.....	6,163	9,336	11,952	4,384,000	31.7	16.9	2,822,598
1931							
January.....	5,364	11,706	28,536	4,887,000	34.2	19.2	3,364,770
February.....	4,070	11,557	40,766	4,972,000	34.5	19.5	3,496,979
March.....	2,765	11,491	50,815	4,756,000	33.6	18.9	3,240,523
April.....	2,424	12,663	49,958	4,358,000	31.2	18.0	2,789,627
May.....	1,368	7,342	41,339	4,053,000	29.9	17.4	2,507,732
June.....	931	6,320	36,237	3,954,000	29.7	17.7	2,353,657
July.....	634	6,790	35,916	3,976,000	31.0	19.1	2,231,513
August.....	933	9,160	37,673	4,215,000	33.6	21.4	2,376,589
September.....	2,096	12,176	38,524	4,355,000	35.0	22.2	2,483,364
October.....	5,425	14,824	51,654	4,623,480	36.6	22.0	2,534,952
November.....	7,554	18,095	92,157	5,059,773	38.9	21.8	2,771,985
December.....	9,055	17,223	147,009	5,668,187	42.2	22.3	3,147,867
1932							
January.....	9,318	20,944	241,487	6,041,910	43.6	22.6	3,481,418
February.....	9,096	18,856	293,198	6,128,429	44.1	22.6	3,525,486
March.....	8,395	16,723	303,218	6,034,100	44.6	22.6	3,323,109
April.....	6,029	17,699	282,013	5,934,202	43.9	22.1	2,906,890
May.....	4,853	16,885	262,184	5,582,620	43.3	22.9	2,658,042
June.....	5,384	13,189	232,371	5,476,000	-----	-----	2,484,944

Date (end of month)	Great Britain and Northern Ireland				Great Britain	Hungary	
	Compulsory insurance				Number of persons registered with employment exchanges	Trade-unionists unemployed	
	Wholly unemployed		Temporary stoppages			Christian (Buda-pest)	Social-Democratic
	Number	Per cent	Number	Per cent			
1930							
June.....	1,341,818	11.1	569,931	4.7	1,890,575	829	18,960
July.....	1,405,981	11.6	664,107	5.5	2,011,467	920	19,081
August.....	1,500,960	12.4	618,658	5.1	2,039,702	847	21,013
September.....	1,579,708	13.1	608,692	5.0	1,114,955	874	22,252
October.....	1,725,731	13.9	593,223	4.8	2,200,413	999	22,914
November.....	1,836,280	14.8	532,518	4.3	2,274,338	975	23,333
December.....	1,853,575	14.9	646,205	5.3	2,392,738	935	24,648
1931							
January.....	2,044,209	16.5	618,633	5.0	2,613,749	953	26,191
February.....	2,073,578	16.7	623,844	5.0	2,627,559	965	27,089
March.....	2,052,826	16.5	612,821	5.0	2,581,030	996	27,092
April.....	2,027,896	16.3	564,884	4.6	2,531,674	1,042	27,129
May.....	2,019,533	16.3	558,383	4.5	2,596,431	843	26,131
June.....	2,037,480	16.4	669,315	5.4	2,629,215	751	23,660
July.....	2,073,892	16.7	732,583	5.9	2,662,765	876	26,329
August.....	2,142,821	17.3	670,342	5.4	2,732,434	941	28,471
September.....	2,217,080	17.9	663,466	5.3	2,879,466	932	28,716
October.....	2,305,388	18.1	487,591	3.8	2,755,559	1,020	28,998
November.....	2,294,902	18.0	439,952	3.4	2,656,088	1,169	29,907
December.....	2,262,700	17.7	408,117	3.2	2,569,949	1,240	31,906
1932							
January.....	2,354,044	18.4	500,746	4.0	2,728,411	1,182	32,711
February.....	2,317,784	18.2	491,319	3.8	2,701,173	1,083	32,645
March.....	2,233,425	17.5	426,989	3.3	2,567,332	1,024	31,340
April.....	2,204,740	17.3	521,705	4.1	2,652,181	961	30,057
May.....	2,183,683	17.1	638,157	5.0	2,741,306	-----	-----
June.....	2,145,157	16.8	697,639	5.5	2,747,343	-----	-----

See footnotes at end of table.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Irish Free State	Italy		Latvia	Netherlands	
	Compulsory insurance—number unemployed	Number of unemployed registered		Number unemployed remaining on live register	Unemployment insurance societies—unemployed	
		Wholly unemployed	Partially unemployed		Number	Per cent
1930						
June.....	19, 146	322, 291	21, 887	779	23, 678	5.5
July.....	(²)	342, 061	24, 209	607	29, 075	6.7
August.....	(²)	375, 548	24, 056	573	32, 755	7.6
September.....	20, 775	394, 630	22, 734	1, 470	35, 532	8.2
October.....	22, 990	446, 496	19, 081	6, 058	41, 088	9.6
November.....	25, 622	534, 356	22, 125	8, 608	46, 807	11.8
December.....	26, 167	642, 169	21, 788	10, 022	81, 204	18.2
1931						
January.....	28, 681	722, 612	27, 924	9, 207	100, 340	23.2
February.....	26, 825	765, 325	27, 110	8, 303	109, 235	23.5
March.....	25, 413	707, 486	27, 545	8, 450	102, 743	21.8
April.....	23, 970	670, 353	28, 780	6, 390	68, 860	14.3
May.....	23, 016	635, 183	26, 059	1, 871	60, 189	12.2
June.....	21, 427	573, 593	24, 206	1, 584	59, 573	11.7
July.....	21, 647	637, 531	25, 821	2, 169	69, 026	13.3
August.....	21, 897	693, 273	30, 636	4, 827	70, 479	15.3
September.....	23, 427	747, 764	29, 822	7, 470	72, 738	15.7
October.....	26, 353	799, 744	32, 828	13, 605	84, 548	18.0
November.....	30, 865	878, 267	30, 967	18, 377	107, 372	18.5
December.....	30, 918	982, 321	32, 949	21, 935	147, 107	27.8
1932						
January.....	31, 958	1, 051, 321	33, 277	26, 335	145, 124	27.0
February.....	31, 162	1, 147, 945	26, 321	22, 222	139, 956	25.4
March.....	30, 866	1, 053, 016	31, 636	22, 912	119, 423	21.6
April.....	32, 252	1, 000, 025	32, 720	13, 048	121, 378	21.7
May.....	35, 874	968, 456	35, 528	—	112, 325	22.5
June.....	—	905, 097	—	—	113, 978	22.8

Date (end of month)	New Zealand	Norway		Poland	Rumania	
	Trade-unionists, number unemployed	Trade-unionists (10 unions) unemployed		Number unemployed registered with employment offices	Number unemployed remaining on live register	
		Number	Per cent			
1930						
June.....	(²)	4, 700	10.8	13, 939	204, 982	22, 960
July.....	(²)	4, 723	10.8	11, 997	193, 687	23, 236
August.....	7, 197	5, 897	13.4	12, 923	173, 627	24, 209
September.....	(²)	7, 010	15.7	17, 053	170, 467	39, 110
October.....	(²)	8, 031	18.0	20, 363	165, 154	36, 147
November.....	8, 119	9, 396	21.4	24, 544	209, 912	42, 689
December.....	(²)	11, 265	25.5	27, 157	209, 797	36, 212
1931						
January.....	(²)	11, 692	26.3	28, 596	340, 718	38, 804
February.....	(²)	(²)	—	29, 107	358, 925	43, 270
March.....	38, 028	11, 213	24.9	29, 095	372, 536	48, 226
April.....	36, 981	(²)	—	28, 477	351, 679	41, 519
May.....	40, 507	—	—	25, 206	313, 104	33, 484
June.....	45, 264	—	—	22, 736	274, 942	28, 093
July.....	47, 772	—	—	20, 869	255, 179	29, 250
August.....	50, 033	—	—	22, 431	246, 380	22, 708
September.....	51, 375	—	—	27, 012	246, 426	22, 909
October.....	50, 266	9, 048	19.6	29, 340	255, 622	28, 800
November.....	47, 535	10, 577	22.8	32, 078	266, 027	43, 917
December.....	45, 140	12, 633	27.2	34, 789	312, 487	49, 393
1932						
January.....	45, 677	14, 160	30.4	35, 034	338, 434	51, 612
February.....	44, 107	14, 354	30.6	38, 135	350, 145	57, 606
March.....	45, 383	15, 342	32.5	38, 952	360, 031	—
April.....	47, 530	14, 629	30.8	37, 703	339, 773	—
May.....	—	—	—	—	288, 000	—
June.....	—	—	—	32, 127	252, 900	—

See footnotes at end of table.

EMPLOYMENT CONDITIONS AND UNEMPLOYMENT RELIEF 281

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

	Saar Ter- ritory	Sweden		Switzerland				Yugo- slavia
Date (end of month)	Number unem- ployed registered	Trade-unionists unemployed		Unemployment funds				Number of unem- ployed registered
				Wholly unem- ployed		Partially unem- ployed		
		Number	Per cent	Number	Per cent	Number	Per cent	
1930								
June.....	6,330	28,956	8.1	5,368	1.7	17,688	5.7	6,991
July.....	7,095	27,170	7.8	4,751	1.9	15,112	6.2	7,236
August.....	7,099	28,539	8.1	5,703	2.3	19,441	7.9	6,111
September.....	7,527	34,963	9.8	7,792	2.5	26,111	8.3	5,973
October.....	9,013	43,927	12.2	7,399	3.0	23,309	9.4	6,609
November.....	12,110	57,070	15.3	11,666	4.7	25,793	10.5	7,219
December.....	15,245	86,042	22.9	21,400	6.6	33,483	10.4	9,989
1931								
January.....	18,921	69,437	19.8	20,551	8.3	30,977	12.5	11,903
February.....	20,139	66,923	18.4	20,081	7.9	30,879	12.2	14,424
March.....	18,292	72,944	19.3	18,991	5.4	41,880	12.4	12,029
April.....	18,102	64,534	17.5	10,389	4.0	27,726	10.6	11,391
May.....	14,886	49,807	13.2	9,174	3.5	26,058	9.9	6,929
June.....	15,413	45,839	12.1	12,577	3.6	34,266	9.7	4,431
July.....	17,685	46,180	12.4	12,200	3.3	39,000	11.3	6,672
August.....	20,205	48,590	12.7	9,754	3.6	33,346	12.4	7,466
September.....	21,741	54,405	13.7	15,188	4.0	42,998	11.2	7,753
October.....	24,685	65,469	16.4	18,000	4.8	47,200	13.2	10,070
November.....	28,659	79,484	19.9	25,200	6.6	51,900	14.4	10,349
December.....	35,045	110,149	27.2	41,611	10.1	61,256	14.9	14,502
1932								
January.....	38,790	93,272	24.5	44,600	10.6	67,600	14.8	19,665
February.....	42,394	93,900	23.0	48,600	11.3	70,100	15.0	21,435
March.....	44,883	98,772	24.4	40,423	9.0	62,659	14.0	23,251
April.....	42,993	82,500	21.0	35,400	7.7	58,900	12.6	18,532
May.....	42,881	75,650	18.9	35,200	7.6	-----	-----	13,568

¹ Sources: League of Nations—Monthly Bulletin of Statistics; International Labor Office—International Labor Review; Canada—Labor Gazette; Great Britain—Ministry of Labor Gazette; Austria—Statistische Nachrichten; Australia—Quarterly Summary of Australian Statistics; Germany—Reichsarbeitsblatt, Reichs Arbeitsmarkt Anzeiger; Switzerland—Wirt. u. Social, Mitteilungen, La Vie Economique; Poland—Wiedomosci Statystyczne; Norway—Statistiske Meddelelser; Netherlands—Maandschrift; Sweden—Sociala Meddelanden; Denmark—Statistiske Efterretninger; Finland—Bank of Finland Monthly Bulletin; France—Bulletin du Marché du Travail; Hungary—Magyar Statisztikai Szemle; Belgium—Revue du Travail; New Zealand—Monthly Abstract of Statistics; U. S. Department of Commerce—Commerce Reports and U. S. Consular Reports.

² Not reported.

³ New series of statistics showing unemployed registered by the employment exchanges. Includes not only workers wholly unemployed but also those intermittently employed.

⁴ Strike ended.

Land Settlement as Unemployment Relief in British Columbia¹

AS AN aid in relieving unemployment British Columbia is preparing to put into early operation a plan of land settlement, with the assistance of the Dominion, provincial, and municipal governments.

In the ranks of the thousands of unemployed now receiving direct (cash and food) relief from public funds in British Columbia are many married men who, attracted in recent years by the promise of high wages and the apparent advantages of city life, have deserted the farms. It is now intended to afford these men with agricultural experience an opportunity to return to their former occupations under circumstances calculated to improve their present condition and morale as well as to assist in solving the problem of unemployment relief in the larger centers of population.

¹ Report from Harold S. Tewell, American Consul at Vancouver, B. C., May 23, 1932.

The plan contains the following salient features: Only unemployed married men are eligible, and will be selected by a nonpolitical board already appointed for that purpose, selection to be made on the basis of experience in farming and the desire to return to that occupation. Settlement will be made in agricultural areas convenient to markets and already provided with roads and schools.

Land available for the purpose includes extensive areas of public domain as well as partially improved acreage that has reverted to the provincial and municipal governments because of nonpayment of taxes. Since 1918, it is said, 2,654,321 acres of farm lands have come into the possession of the provincial government through failure to pay taxes, and of that total 2,000,000 acres are said to consist of parcels of 40 or more acres. In one municipality near Vancouver almost one-third of the land is said to be nontaxable, being held by the Government, leaving the remaining two-thirds to bear the burden of taxation in that municipality. The present plan therefore not only is a measure of unemployment relief, but will ultimately relieve the taxpayers by increasing the extent of revenue-producing lands as settlers become established. But should any family of settlers fail for any reason to establish itself successfully on the land, the Government would not wholly lose thereby, since the property will have been materially improved by the last settler and made salable to farmers having financial resources.

The first tracts to be opened to settlement under this scheme consist of 5,000 small parcels near Vancouver, the principal market in British Columbia. Numerous applications are said to have been received for such lands; owing to the limited portion of available unemployment relief funds that may be devoted to that purpose, however, it is said to be probable that not more than 600 to 700 families can be accommodated this year. Although apparently it is not the purpose to donate these lands to the unemployed, no payments of any description will be required for the time being. It has been suggested that, as conditions improve, the settlers might be offered the opportunity to purchase on easy terms the property they occupy, at its assessed value.

The Dominion Government has indicated its willingness to assist by advancing to each settler \$200 cash, with the stipulation that it shall be expended only for equipment and the immediate needs of the family. Similar contributions are to be made by the provincial government and by the municipality concerned, the latter to be spread over a period of two years.

It is expected that by the end of two years most of the families will to a large extent be self-supporting; meanwhile they will not have cost the public treasuries any more than if they had remained on direct relief in the cities. In any event, rather than add to the thousands of unemployed now housed in various camps throughout British Columbia, the provincial government has adopted the practice of supplementing with supplies the deficiency in income of poor rural settlers, and urging them to put in a crop this year.

Revival of Interest in Farming

THERE is said to be a steady demand for cleared agricultural land in British Columbia; that is, former timberlands from which stumps and the heavy growth of brush have been removed. It is said that

in these times the average farmer is financially unable to undertake the expense of clearing in the first year space sufficient to raise a crop upon which he can live until the second year. As an experiment the Government provided work for a number of unemployed in clearing 1,600 acres in the Fraser River Valley, half of which is reported to have been sold in 32 plots.

The increasing interest in farming, despite the low prices of agricultural products, is evident in recent reports on the preemptions filed in the Peace River Block in northeastern British Columbia. Since August 1, 1930, when the area was first opened to claim stakers, 300,000 acres are said to have been taken up by 2,500 families, and in the week ending May 14, when the district was closed to preemption, 250 tracts of approximately 10,000 acres are reported to have been taken. Hereafter all lands in that district must be purchased at prices varying from \$2.50 to \$5 per acre and it is only upon those terms that unemployed single men may acquire public farm lands anywhere in British Columbia.

Camp Life for Unemployed Men in Great Britain

THE Manchester Guardian, in its issue for July 1, 1932, gives a brief account of a plan for utilizing the enforced leisure of the unemployed which is now being initiated. The plan is backed by an educational and social organization which has opened at Godshill, on the edge of the New Forest, the first of a series of camps for unemployed young men, and has assembled here about 30 men, between the ages of 18 and 25, who are to stay for a period of 18 months. These, who are not from the ranks of the unemployed, are to be the leaders and organizers of the whole movement. The Guardian gives the following summary of the plan:

The future campers will maintain themselves either by paying a pound weekly or, in the case of insured persons, by handing over their unemployed benefit or transitional payment. Sleeping quarters have been built from timber on the site, which has been obtained at a nominal rental, and a plot of land for vegetable growing is being brought into cultivation.

The general idea is to give to young men out of work a healthy and productive life in which they will be providing largely for their own wants in food, clothing, and recreation. These men after their experience in camp should be in a position to return to industry refreshed instead of demoralized. At all events, their life, while technically unemployed, will be vigorous and useful. The project is being carried out in close collaboration with the Ministry of Labor, which has agreed to pay unemployment and transitional benefit to the men in camp. The men now at Godshill are drawn from many occupations. They are both manual workers and what are known as "black-coated" workers.

Some £300 has been subscribed by sympathizers, but more contributions are needed for the provision of equipment in readiness for the winter in this and other camps of the kind which it is hoped to start in different parts of the country as suitable land at a sufficiently cheap rate can be secured.

INDUSTRIAL ACCIDENTS

Industrial Injuries in California, 1931

THE June report of the California Department of Industrial Relations announces the completion by the industrial accident commission of its statistical survey of fatal and nonfatal injuries in the industries of the State during 1931.

Reports were received of 477 fatalities, 748 injuries resulting in permanent impairment of at least 1 per cent, 68,851 resulting in temporary disability extending beyond the day of injury, and 160,439 not causing loss of time but requiring skilled medical treatment, making a total of 230,515 injuries for the year.

Compared with 1930, the figures show decreases of 25.1 per cent for fatalities, 12.4 per cent for permanent disabilities, 14.5 per cent for temporary disabilities, and 15.3 per cent for nondisabling injuries. It is pointed out that the comparatively low accident record is to be expected as an outcome of economic conditions.

It was found that 76 of the 477 deaths occurred in public utilities, 50 in engineering construction, 45 in agriculture, 44 in cartage and storage, 37 in building construction, 32 in care and custody, 31 in railroad operation, 28 in clerical and professional, 23 in commercial enterprises, 21 in oil production, 19 in mining and milling, 16 in lumber and wood manufacturing, and 10 each in food and beverages manufacturing and chemical manufacturing. The other 35 deaths occurred in 11 different industries.

The principal causes of death were vehicles, 170; falls of persons, 65; falling objects, 63; machinery, 47; hot, poisonous, and corrosive substances and flames, 29; and explosions and electricity, 25 each.

The lumber and wood manufacturing group is charged with 119 of the permanent injuries, while the number incurred in commercial enterprises, metal working, foods and beverages manufacturing, agriculture, and building construction range between 50 and 60. Agriculture was responsible for 8,912 of the temporary injuries, commercial enterprises for 8,553, building construction for 7,066, care and custody for 6,121, foods and beverages manufacturing for 5,289, cartage and storage for 5,015. None of the other industrial groups exceeded 5,000.

The main cause of the permanent injuries was machinery, charged with 436 of these, and the other causes were below the 60 mark, while the principal cause of the temporary injuries was handling of objects, with 14,517, followed by falls of persons, with 12,147. None of the other causes showed above 10,000.

Fatal Accidents in Kansas, 1931

A SUMMARY of accidental deaths in Kansas during 1931, furnished by the Kansas State Board of Health, shows that only 11 of the industrial fatalities originated in connection with manufacturing industries. Building and contracting were charged with 12 deaths; public utilities and railroads with 33 deaths; mining, quarry-

ing, and other extractive industries with 27 deaths; but these industries were completely overshadowed by the 95 deaths originating in connection with farm work. This would indicate that farm work was responsible for 41.9 per cent of the 227 deaths due to occupational accidents or for 6.4 per cent of all accidental deaths in the State (1,488) during the year.

An accompanying analysis of 95 deaths originating in connection with farm work showed that injuries received from farm machinery were responsible for the largest number listed under one cause, a total of 22. Of this total, 9 accidents occurred in connection with the operation or handling of tractors; 2 each in connection with combines, plows, and corn binders; and 1 each in connection with a corn cutter, mowing machine, wheat header, hay stacker, hay fork, windmill, or circular saw.

Fifteen of the persons who died as a result of injuries from farm machinery averaged 129 days from the day of injury to the day of death, and 10 of the deaths occurred on the same day the injury was received.

Excessive heat caused 19 deaths, while injuries from animals were responsible for 9 of the fatalities, 5 being caused by being "gored or butted by a bull," and 2 by being kicked by a horse. Falls on the level and falls from ladders or other elevations aside from machines were also responsible for 9 deaths.

Causes shown for the other minor groups include runaway horse-drawn wagon, and lightning, 7 each; falls from animals or moving vehicles, 6; accidental punctures causing septicemia, 5; falling trees, 4; accidental burns 3; and 1 each for excessive cold, poisoning, electricity, and miscellaneous.

The total of accidental deaths for 1931 is stated to be the third highest in Kansas for any 12-month period. It amounts to 7.9 per cent of all deaths and established a death rate from accidents at 78.8 per 100,000 population.

The following table shows the total number of fatal accidents in the State in 1931, by type of accident.

NUMBER OF ACCIDENTAL FATALITIES IN KANSAS IN 1931, BY TYPE OF ACCIDENT

Type of accident	Number	Type of accident	Number
Industrial:		Public, not motor vehicle—Continued.	
Manufacturing.....	11	Electric car.....	2
Public utilities and railroads.....	33	Other vehicle.....	4
Building and contracting.....	12	Water.....	2
Mining, quarrying, and other extractive industries.....	27	Airplane.....	20
Farming.....	95	Falls.....	33
Others.....	49	Burns, scalds, and explosions.....	6
Total.....	227	Drowning.....	68
		Firearms.....	28
		Others.....	61
		Total.....	282
Motor vehicles:		Home:	
Collision with pedestrian.....	87	Falls.....	262
Collision with motor vehicle.....	122	Burns, scalds, and explosions.....	82
Collision with railroad train.....	51	Asphyxiation and suffocation.....	13
Collision with electric car.....	3	Poisons.....	18
Collision with bicycle.....	3	Cuts and scratches.....	49
Collision with horse-drawn vehicle.....	3	Others.....	85
Collision with fixed object.....	28	Total.....	509
Collision with road grader.....	1		
Nonoperating accidents.....	172	Grand total.....	1,488
Total.....	470		
Public, not motor vehicle:			
Railroad.....	58		

CHILD LABOR

Industrial Accidents to Minors in Illinois in 1931

THE April, 1932, issue of the Labor Bulletin, published by the Illinois Department of Labor, presents a summary of injuries to minors under 18 years of age employed in Illinois. Most of the cases included in the summary are those of minors injured since July 1, 1927, the date of effectiveness of the law providing for 50 per cent additional compensation in case of minors injured while illegally employed.

The total number of industrial accidents to minors under 18 years of age reported during 1931 was 432, of which 412 involved the loss of more than six working-days or some injury which, if it came under the compensation act, would be compensable. There were 64 accidents to children under 16 years of age. The first case of permanent total disability resulting from an industrial accident to a minor under 18 years of age during the 6-year period covered by this study was reported in 1931.

The following table shows the industries in which these children under 16 years were injured, and the extent of the disability involved.

NUMBER OF ACCIDENTS IN 1931 TO MINORS UNDER 16, LEGALLY OR ILLEGALLY EMPLOYED, IN ILLINOIS, BY INDUSTRY AND EXTENT OF DISABILITY

Industry and extent of disability	Number of accidents to minors—		
	Legally employed	Illegally employed	Total
Industry:			
Agriculture.....	1	0	1
Manufacturing.....	7	17	24
Construction.....	1	3	4
Communication.....	2	0	2
Trade and finance.....	0	21	21
Services not otherwise classified.....	5	5	10
Governmental services.....	0	1	1
Industry not reported.....	1	0	1
Total.....	17	47	64
Extent of disability:			
Fatal.....	0	4	4
Permanent partial.....	2	12	14
Disfigurement.....	1	1	2
Temporary.....	14	29	43
Loss of 6 working-days or less.....	0	1	1
Total.....	17	47	64

Compensation Cases of Minors in Wisconsin Closed in 1931

SSTATISTICS of compensable injuries to minors in Wisconsin are presented in Wisconsin Labor Statistics, May, 1932 (Bulletin No. 38), which is devoted to the subject of child labor in the State during 1931.

Under the employment regulations of Wisconsin, labor permits may be issued by the industrial commission to children under 17 years of age, allowing them to work (except in certain employments, which are prohibited because of their hazardous character), and the employment of such minors without permits is illegal. Permits are not

required for minors between 17 and 21 years of age, but their employment in certain occupations is illegal.

The State compensation act provides that a minor of permit age who is injured while employed without a labor permit in otherwise lawful employment is entitled to double indemnity. A minor injured while employed in a prohibited occupation is entitled to triple indemnity. The increased liability can not be insured, and is consequently paid by the employer instead of by the insurance carrier. This provision discourages the illegal employment of minors and also secures to the claimant practically the amount of the indemnity which would ordinarily be recovered at common law, but without the delay involved under that procedure.

The number of cases in which the increased compensation was claimed, and the difference in cost to the respective employers, by calendar years, from 1921 to 1931, are shown in Table 1.

TABLE 1.—INCREASED COMPENSATION PAID FOR INJURIES TO MINORS ILLEGALLY EMPLOYED IN WISCONSIN, 1921 TO 1931

Year	Number of cases			Amount of compensation	
	Em- ployed without permit	Em- ployed in pro- hibited work	Total	Normal	Penalty
1921.....	86	11	97		\$24,499.37
1922.....	65	10	75	\$6,135.00	12,387.46
1923.....	63	6	69	9,781.79	19,640.24
1924.....	73	14	87	15,214.44	30,604.58
1925.....	50	7	57	5,805.76	11,596.39
1926.....	49	17	66	12,839.17	22,434.24
1927.....	30	15	45	11,110.82	16,112.49
1928.....	33	20	53	7,593.86	9,653.91
1929.....	26	13	39	9,192.85	10,057.61
1930.....	31	9	40	8,914.99	13,634.63
1931.....	12	5	17	5,335.95	8,787.20

Table 2 shows the number of compensable cases closed during the year, by extent of injury, time cost, and money cost, classified according to age of the injured minor.

TABLE 2.—COMPENSATION CASES OF MINORS IN WISCONSIN CLOSED DURING 1931, TIME LOST, AND BENEFITS PAID, BY AGE OF INJURED

Age	Number of cases				Number of days lost	Total compensation paid	Medical aid in fee cases ¹		Funeral expenses
	Death	Perma- nent partial disa- bility	Tem- porary disa- bility	Total			Num- ber of cases	Amount paid	
12 years.....	0	0	1	1	36	\$41	1	\$35	-----
13 years.....	0	0	3	3	40	37	3	103	-----
14 years.....	0	0	6	6	272	365	6	831	-----
15 years.....	1	1	15	17	1,596	6,037	17	1,247	-----
16 years.....	0	3	32	35	4,619	6,551	33	2,930	-----
17 years.....	3	6	102	111	11,293	15,394	104	7,176	\$200
18 years.....	0	41	253	294	31,402	39,776	286	14,201	-----
19 years.....	5	34	416	455	59,085	48,302	430	21,704	1,000
20 years.....	4	29	407	440	35,979	42,649	420	20,902	400
Total.....	13	114	1,235	1,362	144,322	159,152	1,300	69,129	1,600

¹ Contract medical aid cases not included.

WORKMEN'S COMPENSATION

Nevada Mine Safety Law Held Not Applicable to Work on Hoover Dam

ACCORDING to a decision of the United States District Court, Nevada District, the lives and health of the employees engaged in the construction of Hoover Dam are not endangered by the use of gasoline motor trucks in tunneling operations and therefore the court issued a temporary injunction restraining the State mine inspector from attempting to enforce the Nevada safety law, prohibiting the use of such trucks in tunnels under construction on that project. (*Six Companies (Inc.) v. Stinson*, 58 Fed. (2d) 649.)

The Six Companies (Inc.) secured the contract with the United States for the construction of Hoover Dam. In order to divert the flow of the stream from its normal bed it was necessary to dig four tunnels about 4,000 feet long and 56 feet in diameter, two on the Arizona side of the river and two on the Nevada side. Stinson, inspector of mines of Nevada, ordered the construction company to cease using gasoline-propelled trucks in removing the rock and dirt from the tunnels on the Nevada side, contending that the use of such trucks violated section 4229 of the Nevada Compiled Laws, 1929. The question was carried to the district court by the company and upon the filing of the complaint, on November 13, 1931, a preliminary restraining order was issued restraining the State mine inspector from interfering. The order was continued in force and a motion for a temporary injunction was submitted to the court in April, 1932.

In support of this motion the construction company contended that the State of Nevada is without jurisdiction to enforce laws in this area, as it had been ceded by the State to the Federal Government; that the law the State mine inspector attempted to enforce is void because it amends another statute without reenacting and publishing the statute as required by article 4 of the State constitution, and because it violates the fourteenth amendment to the Federal Constitution; and lastly, that the construction company "in performing its contract is an instrumentality of the United States, and hence not subject to State police regulations."

Stinson challenged these allegations and further contended that the action was in effect one against the State and therefore the district court was without jurisdiction.

The court, before considering the statute itself, settled the jurisdictional question by quoting from the case of *Truax v. Raich* (239 U. S. 33) as follows:

As the bill is framed upon the theory that the act is unconstitutional, and that the defendants, who are public officers concerned with the enforcement of the laws of the State, are about to proceed wrongfully to the complainant's injury

through interference with his employment, it is established that the suit can not be regarded as one against the State.

Judge Norcross, speaking for the court, said that the questions involving the validity of the reservations, the constitutionality of the act, and the relinquishment of jurisdiction by the State should not be determined upon a preliminary hearing; the court therefore, in determining whether the temporary injunction should be granted, weighed the interests involved. It appeared that the injury to the construction company would be certain and irreparable if the injunction were denied, as the company had alleged a large investment in the gasoline-propelled trucks and a great increase in expenses and a loss in time, should their use be discontinued. The company also contended that the use of such trucks did not endanger the lives and imperil the health of its employees, and that a statute requiring it to adopt some other means would "be in effect depriving it of its property without due process of law."

At the time of this hearing the court found the tunnels were about completed and "the possibility of serious danger from an accidental interruption of the ventilation system as extremely remote." The only work remaining to be done was the excavation in the floor of the tunnel known as the "invert." There also remained some rock on the walls of the tunnel to be removed and it was the desire of the company to remove the excavated material by the use of the gasoline-propelled trucks. In concluding the opinion granting the temporary injunction the court said:

The question, as the court is now called upon to deal with it, is the danger, if any, which exists in using gasoline-propelled trucks in further enlarging a completed tunnel the height and width of which now average approximately 40 feet. We do not understand that there is any contention that such danger longer exists.

Compensation Insurance Rating Based on Individual Accident Experience Upheld in Ohio

THE Supreme Court of Ohio has held that the State industrial commission was justified in imposing on an employer a premium rate exceeding that prevailing in the same industry but based on the accident experience of the individual employer. (State ex rel. Powhatan Mining Co. v. Industrial Commission of Ohio et al., 181 N. E. 99.) Under the provisions of section 1465-54, paragraph 4, of the Ohio General Code, the industrial commission is empowered to apply a form of merit rating system which it considers most equitable, predicated upon the basis of the individual industrial accident experience. Acting under this authority, the industrial commission imposed upon the Powhatan Mining Co. a premium rate higher than the basic rate for the coal-mining industry. The company contended that neither the constitution of the State nor any statute gave the commission authority for this action. The rating system, it insisted, was required to be imposed upon occupation groups according to their degree of hazard and could not be applied to separate individual employers composing the class.

The brief filed by the counsel for the coal company cited the constitution as empowering the legislature "to authorize the industrial commission to fix rates of contribution by employers to the State

insurance fund according to the classification of industry. It clearly does not authorize the establishment of a rate in addition thereto based upon the individual experience of an employer."

The Supreme Court of the State of Ohio, however, speaking through Justice Jones, stated that in its opinion the legislative authority conferred was far more comprehensive than such a construction of the constitution would allow. It was evident, the court said, that the purpose of the constitutional provision was to provide compensation for workmen and to establish a State fund insurance created by compulsory contributions from the employer and to be administered by the State, and the State in addition was empowered to determine the terms and conditions upon which payment should be made from such fund. The court also cited that part of the constitutional provision relative to the point under consideration, and in doing so noted that the legislature had authority to classify, not industries or groups in industries, but "all occupations according to their degree of hazard." There is no doubt, the court observed, that the legislature could apply a rating system to groups of employers if it so desired, but there was no language in the constitution prohibiting the legislature from departing from the group classification if it was determined at any time that the group system was inequitable or unwise. The legislative authority to "classify all occupations," the court said:

Comprehends a classification of each and every occupation according to the degree of hazard affecting the individual occupation engaged in by an employer. The various provisions of the constitution connote that meaning; their underlying spirit contemplates a purpose not only to provide compensation to workmen and their dependents, but to preserve, as far as possible, the factor of safety in the conduct of an employer's particular business, and to prevent loss of life and injuries to his employees. That this was the purpose of the constitution was shown by the following significant clause: "Such board shall set aside as a separate fund such proportion of the contributions paid by the employers as in its judgment may be necessary, * * * to be expended by such board * * * for the investigation and prevention of industrial accidents and diseases."

The court, in rendering its opinion, gave a brief history of the nature and purpose of the State fund and stated that—

Those employers who, in the language of the statute, do "encourage and stimulate accident prevention," are naturally interested that the fund shall not be depleted, thereby entailing heavier contributions on their part. It would be inequitable to impose upon the careful employer not only an amount of premium sufficient to cover his own individual risk, but also an additional premium necessary to pay for heavy casualties sustained by other less careful employers. There are some individual employers in a group of similar occupations who are more diligent than others in the conduct of their particular plant operation, and in the prevention of accidents, and by such conduct impose a lesser burden upon the State insurance fund.

The court reverted to the history of the legislative powers derived from the State constitution. In the early years following the adoption of the constitution the legislature, acting under its general police powers, confined the classification to groups of industries conducting similar businesses, and established a system of rating for such groups. On the basis of further experience it later made the provision authorizing application of the rating system on a more equitable basis of classification, i. e., on the basis of the "individual accident experience."

This language, the court held, was "clear and explicit."

It was pointed out that the classification employed by the commission embraced two classes, both based upon the accident experience: (1) Those employers who carry on their operations with care,

and (2) those who, although they may be in the same group, so carelessly manage their individual businesses as to cause a higher percentage of injuries to their employees. The merit of this classification is that it assures that employers shall pay into the State fund an amount of premium that will substantially cover their own individual risks, but it does not impose upon the careful employer the additional burden of paying a further and higher premium rate to cover risks incurred in a similar business not operated with the same degree of care. The court answered the argument advanced by the company, namely, that employers in the latter class are sufficiently penalized by the imposition of additional awards for failure to comply with specific requirements, by saying that this does not always meet the situation, since a particular business may be conducted unskillfully where no such requirements have been authorized.

The court was of the opinion that the legislature had adopted a reasonable basis for classification of individual occupations according to their degree of hazard, by basing its action upon individual accident experience, and that the provision (sec. 1465-54, par. 4) was not opposed to either the Federal or State constitutions, since the classification was neither unreasonable nor arbitrary. The basis of this classification, the court held, has been sustained both by State and Federal courts; and it cited the two following decisions by the United States Supreme Court in substantiation of this contention.

In the case of *Middleton v. Texas Power & Light Co.* (249 U. S. 152), it was said: "There is a strong presumption that a legislature understands and correctly appreciates the needs of its own people, that its laws are directed to problems made manifest by experience, and that its discriminations are based upon adequate grounds," and in the case of *Lindsley v. Natural Carbonic Gas Co.* (220 U. S. 61), that—

A classification having some reasonable basis does not offend against that clause [the equal protection clause] merely because it is not made with mathematical nicety, or because in practice it results in some inequality. * * * When the classification in such a law is called in question, if any state of facts reasonably can be conceived that would sustain it, the existence of that state of facts at the time the law was enacted must be assumed.

The court therefore denied the writ which sought to prohibit the Ohio Industrial Commission from canceling the protection afforded to the coal-mining company under the State workmen's compensation act, and from imposing or assessing upon it any rate or premium paid to the State fund other than that applicable to the classification of the industry to which the coal-mining company belonged.

Recent Workmen's Compensation Reports

Illinois

STATISTICS of the experience under the workmen's compensation act of Illinois during 1929 are presented in the thirteenth annual report of the Illinois Department of Labor for the year ending June 30, 1930. The accident record and compensation payments are summarized in the two tables following. Table 1 shows the number of compensable fatal and nonfatal accidents reported to the administra-

tion, 1917 to 1929, while Table 2 shows the distribution by industrial groups for 1929.

TABLE 1.—COMPENSABLE FATAL AND NONFATAL ACCIDENTS IN ILLINOIS, 1917 TO 1929

Year	Number of accidents			Year	Number of accidents		
	Fatal	Non-fatal	Total		Fatal	Non-fatal	Total
1917.....	492	36,268	36,760	1924.....	655	53,529	54,184
1918.....	629	37,618	38,247	1925.....	204	51,639	51,843
1919.....	535	37,754	38,289	1926.....	(1)	(1)	57,535
1920.....	597	49,988	50,585	1927.....	720	53,263	53,983
1921.....	498	43,024	43,522	1928.....	667	54,083	54,750
1922.....	534	46,238	46,772	1929.....	715	55,452	56,167
1923.....	675	61,135	61,810				

¹ Data not available.

TABLE 2.—FATAL AND NONFATAL ACCIDENTS IN ILLINOIS, BY INDUSTRY GROUPS, 1929

Industry group	Number of accidents			Industry group	Number of accidents		
	Fatal	Non-fatal	Total		Fatal	Non-fatal	Total
Agriculture.....	3	199	202	Trade and finance.....	47	5,072	5,119
Mining, quarrying, petroleum and other extractive industries.....	127	8,153	8,280	Professional service.....	10	528	538
Manufacturing.....	200	24,516	24,716	Governmental service.....	22	664	686
Construction.....	141	8,366	8,507	Services, not otherwise classified.....	78	4,043	4,121
Transportation and storage.....	74	3,465	3,539	Industry not reported.....	6	153	159
Communication.....	7	293	300	Total, 1929.....	715	55,452	56,167

Table 3 shows the number of compensable accident cases closed during 1929, regardless of the year in which they occurred, by extent of disability, the total amount of compensation paid for each class of disability, and the average amount per case.

At least 78.9 per cent of the total amount of compensation was paid for injuries resulting in death or permanent disability or disfigurement, although of the total number of accidents, 71.9 per cent resulted in temporary disability only.

TABLE 3.—COMPENSABLE ACCIDENT CASES IN ILLINOIS CLOSED DURING 1929 AND AMOUNT OF COMPENSATION PAID, BY EXTENT OF DISABILITY

Extent of disability	Number of cases	Amount of compensation paid	
		Total	Average per case
Fatal.....	606	\$1,631,510	\$2,692
Permanent total.....	14	61,187	4,371
Permanent partial and disfigurement (with or without temporary total).....	14,022	6,758,934	482
Temporary total only.....	38,796	1,821,575	47
Temporary partial only.....	322	18,391	57
Not otherwise classified ¹	628	421,878	672
Not reported.....	2	355	178
Total.....	54,390	10,713,830	197

¹ Includes combinations, such as temporary total combined with temporary partial.

Pennsylvania

AN INTERESTING comparison of the distribution of compensation benefits awarded during 1931 to industrial workers in Pennsylvania appeared in the April, 1932, issue of Labor and Industry, the official publication of the Department of Labor and Industry.¹

Less than 8 per cent of the total working population of the State are employed in the coal-mining industry, but the compensation cost during the year amounted to \$6,105,397, or 43.1 per cent of the total compensation cost for all industries. The second largest amount, \$3,460,222, or 24.4 per cent of all awards, was charged to the manufacturing industry, which employs about 33 per cent of the working population. The construction and contracting industry ranked third, with \$1,919,873, or 13.5 per cent of the total awards; it gives employment to about 7 per cent of the working population.

Table 4 shows the amount and per cent of compensation awards for 1931, by industrial groups.

TABLE 4.—COMPENSATION AWARDED IN PENNSYLVANIA DURING 1931, BY INDUSTRIAL GROUPS

Industry	Amount of compensation	Per cent of total cost
Coal mining.....	\$6, 105, 397	43. 1
Manufacturing.....	3, 460, 222	24. 4
Construction and contracting.....	1, 919, 873	13. 5
State and municipal.....	628, 497	4. 4
Transportation and public utilities.....	611, 573	4. 3
Trading.....	595, 816	4. 2
Miscellaneous.....	567, 491	4. 0
Quarrying and mining other than coal.....	207, 068	1. 5
Hotels and restaurants.....	80, 616	. 6
Total.....	14, 176, 553	100. 0

An analysis by causes shows that 25.2 per cent of the total awards, or \$3,569,988, was due to injuries caused by falling objects. Falls of persons was responsible for 14.2 per cent, or \$2,011,594; cars and engines for 9.6 per cent, or \$1,367,073; handling objects for 9.2 per cent, or \$1,297,769; working machinery for 8 per cent, or \$1,141,040; and motor vehicles for 7.1 per cent, or \$1,007,471.

Wyoming

THE report of the Workmen's Compensation Department of Wyoming for the calendar year 1931 contains several tables covering the experience of the State industrial accident fund during the year.

The department received reports of 2,197 accidents, of which 26 were fatal, 48 caused permanent partial disability, 883 caused temporary total disability, and 1,240 involved medical service only. Coal mining, as the leading industry, paying 39.3 per cent of the total premiums received in 1931, was responsible for the largest number of accidents and a high degree of severity. It is charged with 15 fatalities, 18 permanent partial disabilities, and 412 temporary total disabilities, but with only 31 medical-aid cases. Road and street construction industry ranked second, both in number of accidents and in

¹ Other data relating to 1931 compensation in Pennsylvania were published in Labor Review for April and May, 1932.

premium payments, which were 11.2 per cent of the total. It is charged with 1 fatality, 6 permanent partial disabilities, 99 temporary disabilities, and 142 medical-aid cases.

The fund shows a balance of \$578,698.63 on December 31, 1931, as against \$577,209.39 for the previous year, an increase of \$1,489.24. The total amount of premiums collected, including service and policing charge, was \$331,691.90 and the amount of administrative expense during the year was \$21,187.68, making the cost of administering the State fund 6.4 per cent of the premiums paid.

Table 5 shows the number of claims allowed during the year by the State courts and the total costs for these claims.

TABLE 5.—NUMBER OF CLAIMS AND AMOUNTS AWARDED UNDER WYOMING WORKMEN'S COMPENSATION ACT, 1931, BY EXTENT OF DISABILITY

Extent of disability	Number of cases	Compensation awarded	Amount of other awards	Total amount awarded
Death.....	550	\$65,430.38	¹ \$3,300.00	\$68,730.38
Permanent total disability.....	74	10,454.36		10,454.36
Permanent partial disability.....	396	61,922.09		61,922.09
Temporary total disability.....	1,591	114,751.44		114,751.44
Total.....	2,611	252,558.27	² 73,296.67	² 325,854.94

¹ Funeral expenses.

² Includes medical and hospital service, \$63,115.37; investigations and witness fees, \$6,881.30.

Manitoba

THE report of the Workmen's Compensation Board of Manitoba, Canada, for 1931 reviews the experience under the workmen's compensation act for the calendar year 1931 and presents a detailed analysis of the final accident record for 1930.

The total number of accidents reported to the board by the various groups of employers during 1930 and 1931 is as follows:

TABLE 6.—ACCIDENTS REPORTED IN MANITOBA IN 1930 AND 1931 BY EMPLOYING GROUPS

Group	Number of accidents	
	1930	1931
Steam railways.....	1,600	1,114
Province of Manitoba.....	246	340
City of Winnipeg.....	414	369
General body of employers.....	7,380	5,858
Winnipeg Electric Co.....	129	126
Dominion Government.....	560	467
Total.....	10,329	8,274

The total figures show a decrease for 1931 of 19.9 per cent. The most marked decrease occurred in the operation of steam railways, where the reduction amounted to 30.4 per cent, while the general body of employers, which was responsible for more than 70.8 per cent of all reported accidents during 1931, experienced a decrease of 20.6 per cent.

Fatal accidents showed a decrease of 21.2 per cent for 1931 as compared with 1930, a total of 41 fatalities being reported for 1931 against 52 for 1930.

Workmen's Compensation Legislation in Japan

THE scope of the provisions for compensation for industrial accidents, under the Japanese factory act of 1911, has been considerably broadened by recent legislation setting up a comprehensive workmen's compensation insurance system for Japan.¹

The workmen's compensation law of April 1, 1931, which became effective on that date, covers quarrying, public and private construction, transportation, and "any other dangerous works" or those specified by imperial ordinance as inimical to health. Employers in such enterprises are obliged to pay to injured employees or their legal representatives, compensation for injury, disease, or death resulting from the employment, according to the schedule of benefits promulgated in an ordinance of January 1, 1932.

Employers are obliged to insure their accident compensation risk in a Government workmen's compensation insurance fund provided for by the act. Premium rates are established in an enforcing ordinance dated February 18, 1932.

¹ U. S. Department of Commerce. Bureau of Foreign and Domestic Commerce. Commerce Reports Washington, Apr. 11, 1932, p. 113.

LABOR ORGANIZATIONS

Business Activities of German Labor Unions¹

ACTIVITIES of the German labor unions may be divided into three main groups—political activities, improvement of labor conditions, and business activities.

The business activities of German labor unions have in the course of time become many and varied, and in several fields of industry and trade more or less serious competition is offered to private enterprises. This situation is the result not of a one or two years' mushroom growth but of a steady expansion over a period of years. The unions have acquired business experience at the same time as they have fought for political power. Now they have both and are prepared to use them to fight any attempts to curb their activities. All indications point to the fact that the union leaders and the rank and file of members favor the continuation of the present policy of participation in business, and it is not likely to be abandoned but, on the contrary, carried even further.

Membership and Characteristics of German Trade-Unions

IN ORDER to understand better the nature and extent of their activities, especially in the business field, it is necessary to describe briefly each chief group of unions.

The German Federation of Labor Unions (*Allgemeiner Deutscher Gewerkschaftsbund*) is the leading national group of labor unions. At the end of 1930 it had 5,178,832 members, of whom 4,716,000 were wage earners and 462,263 were salaried employees. The federation is composed of 31 national unions, which together have 13,572 locals. Unions of wage earners predominate in the federation, and among the strongest of them is the Metal Workers' Union, with almost a million members. The more conservative salaried employees have not been attracted by the federation on account of its socialistic tendencies, and this explains their relatively small numerical rôle in the total membership of the federation.

The German Association of Labor Unions (*Deutscher Gewerkschaftsbund*) at the end of 1930 had 1,361,383 members, of whom 769,863 were wage earners and 591,520 were salaried employees. It is made up of 18 different national unions, with 6,013 locals. This association is generally spoken of as the "Christian Unions Association." It is not a close-knit union like the federation, but has more of the character of a loose federation of independent national labor unions. The principal union within its membership is the German National Union of Salaried Employees (*Deutsch-Nationaler Handlungsgehilfenverband*)

¹ Report by C. W. Gray, American vice consul at Berlin, dated June 13, 1932.

which has over 400,000 members and is one of the strongest and most active unions of salaried employees in the country.

The Federation of German Workmen, Salaried and Civil Service Employees (*Gewerkschaftsring deutscher Arbeiter- Angestellten- und Beamtenverbände*) is made up of the Hirsch-Duncker unions, so called from the names of their founders. Its members at the beginning of 1931 numbered 596,673, of whom 198,175 were laborers and 398,498 were salaried employees; 22 national unions with 1,569 locals comprise its membership. Politically it is closely affiliated with the Democratic Party and has been able to send its head director to the Reichstag. The strength of the federation, which is a member of a new international labor union known as the International Association of Neutral Labor Unions, lies in the Association of Salaried Employees (*Gewerkschaftsbund der Angestellten*), which is a clerical employees' union with about 320,000 members.

There are nine national unions of workmen's councils (with 193,340 members, of whom 121,846 are workers and the rest are salaried employees). Of these, the Federation of Patriotic Workers (*Reichsbund vaterländischer Arbeiter- und Werkvereine*), with some 60,000 members, is the largest. These workmen's councils are made up of people who were not trade-unionists, and this form of organization is favored by open-shop employers.

About 66,000 workmen, belonging to five national associations, comprise the rather weak communistic opposition association known as the Revolutionäre Gewerkschafts-Opposition. Individual members form the nucleus of communism in German factories.

Scope of Business Activities

It is not always easy to distinguish between the public service and commercial activities of the German labor unions. Enterprises conducted by them, however, which do have a definite, profit-making commercial character are quite numerous and consist largely of the following groups: Real estate, insurance, banking, printing and publishing, and construction and building.

Real estate.—It is estimated that the labor unions own between 150 and 200 headquarters buildings in Germany, of which the German Federation of Labor Unions alone controls 132. Some of these buildings, such as the headquarters of the federation in Berlin and the skyscraper of the German National Union of Salaried Employees in Hamburg, are magnificent structures and as lavishly furnished as those belonging to any big private business enterprise. The new administration building of the Metal Workers' Union in Berlin cost about 2,000,000 marks² (\$476,000). In one of the suburbs of Berlin the Union of the Neutral Clerical Employees owns an estate upon which it has built administrative offices and a block of apartment houses for the members, in addition to a hotel for young people. The German National Union of Salaried Employees bought an old castle in Thuringia and erected there a modern athletic field. In addition to this, it owns more than 75 urban properties in some 50 German cities and about four or five buildings in foreign capitals.

Insurance.—As is well known, the vast majority of German workers and employees are included in the compulsory sickness insurance

² Conversions into United States currency on basis of mark at par = 23.8 cents.

system of the Federal Government. This limits the opportunities for private enterprises to enter this particular field of social insurance.

However, in the case of insurance of a strictly commercial character, the Hirsch-Duncker, the Christian unions, and the socialistic German Federation of Labor Unions in the last decade have played a prominent rôle. The federation operates two insurance companies. The first is known as the People's Cooperative Insurance Stock Co. and it does life insurance business mainly. The insurance in force at the end of 1931 totaled 888,000,000 marks (\$211,344,000) as compared to 581,000,000 marks (\$138,278,000) at the end of 1928. This is a very satisfactory showing, especially when it is considered that the socialistic unions have far more workingmen than clerical employees and the workingman is not so apt as a salaried employee to take out a subsidiary policy. The other insurance company is known as the Self-help Fire & Property Insurance Stock Co., and its principal activities are in the field of fire and property insurance.

The German Association of Labor Unions and its member unions are very active in the insurance field. One of the prominent life insurance companies of the association is the German Life & Utility Insurance Stock Co., which on January 1, 1931, had policies in force totaling 246,000,000 marks (\$58,548,000). The other company of the association specializes in fire, automobile, and burglary insurance and is known as the German Life Insurance Stock Co. The previously mentioned German National Union of Salaried Employees, numerically strongest and politically most influential member of the German Association of Labor Unions, has organized a group of insurance companies known as the German Chain of Insurance Companies which dates back to the year 1913. The newer branches of the company were founded in 1924, 1926, and 1927, life insurance being the oldest. In 1929 the amount of life insurance in force was 306,000,000 marks (\$72,828,000) and in 1930 it was 347,000,000 marks (\$82,586,400). A remarkable success has been made by the sickness insurance branch of the German National Union of Salaried Employees known as the German Sickness Insurance Society, since it had only 14,395 policies in force in 1926, which number increased to 94,181 in 1930. During the same years the number of persons covered by these policies jumped from 29,506 to 172,493. Since this insurance is not participated in by members of the union, it is fairly obvious that the clients of the German Sickness Insurance Society consist largely of the middle-class people and Government officials. The fire, burglary, accident, and liability business of the insurance society is not so large and important as the life and sickness branches.

The life insurance company of the Hirsch-Duncker unions is an even more pronounced type of business establishment than similar companies of the other unions. It is known as the German World Life Insurance Stock Co., the shares of which are not entirely owned by the unions. Insurance policies in force amounted to 57,000,000 marks (\$13,566,000) in 1930, as compared to 53,000,000 marks (\$12,614,000) in 1929.

Banking.—Practically all of the labor unions operate savings departments which are noteworthy in that they compete not against private business but against the regular municipal savings banks. Although the latter in many cases are in the hands, or at least under

the control, of socialist-minded city governments, the unions have established their own savings departments. On the whole, the latter have not been particularly successful, as the total deposits of the individual unions have rarely been higher than 50,000,000 marks (\$11,900,000). The German National Union of Salaried Employees stated in its 1930 report that the deposits of its members in the savings department amounted to nearly 50,000,000 marks (\$11,900,000). Since the union is represented in nearly every German city, the service offered by its savings department compares rather favorably with that of the large branch banks or the municipal savings banks. A number of the other labor unions have also smaller savings departments and banking institutions, but almost all of them are of little importance from the business standpoint. For instance, the National Farm Workers' Union (member of the Hirsch-Duncker Co. group) founded in 1923 a bank known as the German People's Banking Stock Co. and the railway workers founded in 1922 a bank called the German Trade Union Bank, both of which still exist.

Of far greater importance than the savings departments of the unions are the regular banks which they have founded and control. The largest of these is the Banking Stock Co. for Wage Earners, Salaried Employees, and Officials, popularly called the Labor Bank, which belongs to the German Federation of Labor Unions. It has branches in 20 of the large German cities and agents in 145 other towns, the total business in 1930 and 1931 being 3,000,000,000 marks (\$714,000,000). Its board of directors is largely made up of the high officials of the unions. In its business administrative council there are representatives of 21 different trade-unions. The leaders claim that the policy of the bank is conducted on sound business principles, and this statement seems to be justified since the bank weathered the financial storm of last July very well. It has purchased control of a mortgage bank in Hildesheim (Province of Hanover) known as the Hanover Land Credit Bank. This transaction aroused a great storm of protest, and critics of the Labor Bank held that the labor unions have little justifiable interest in the land-mortgage business. However, the directors of the bank thought otherwise.

The second largest labor bank is the German People's Banking Stock Co. founded by the German Association of Labor Unions, with 10 members on its board of directors representing the various unions. The bank's turnover in 1930 was 481,000,000 marks (\$114,478,000); it is not expected, however, that the 1931 report will be so favorable, since the Ruhr district, where the bank has its main office (Essen), has been severely hit by the depression.

The third bank is known as the German Economy Bank and is a subsidiary of the Hirsch-Duncker group. Its board of directors is not so strictly controlled by the unions. In 1931 the turnover amounted to only 81,000,000 marks (\$19,278,000) and the dividend was passed after having remained at 8 per cent for the past seven years. Deposits dropped from 21,000,000 marks (\$4,998,000) to 17,000,000 marks (\$4,046,000) in 1931.

In close connection with other banking institutions, the national associations of labor unions, such as the German Federation of Labor Unions, etc., have organized their own auditing and accounting firms which are merely engaged in the examination and auditing of the business establishments of the trade-unions.

Publishing and printing.—In the early stages of their development the unions established large printing and publishing houses. This was for the reason that their work among the working classes was mainly carried on with the help of newspapers, magazines, pamphlets, etc., and they wanted to print and publish this material themselves to save profits which otherwise would have been made by private printers.

The German Federation of Labor Unions controls its own publishing and printing house in Berlin. Apparently this house has expanded its business far beyond the realms of the unions themselves, since it is reported to be engaged in real-estate operations, accounting and auditing, and even in banking. In its regular business the house publishes and prints trade-union literature, such as books, magazines, and several weeklies. In addition, it furnishes its members with two well-known books per month.

The Hirsch-Duncker unions in 1928 purchased a printing house in Berlin which, according to reliable information, depends for about 75 per cent of its business on orders from outside of the unions. Another printing concern controlled by this group is the Berlin Sieben Stäbe Verlags und Druckerei G. m. b. H., which publishes mainly the union periodicals, as well as books considered worthy of the interest of the union members and apt to further their politico-economic aims.

The Christian unions control only one large newspaper, *Der Deutsche*, published in Berlin, and a few scientific, political, and economic periodicals. Due to their rather loose structure, these unions have not gone into the publishing business as much as the federation. Their sympathy with the existing order tends to explain the fact that its members largely read the ordinary daily and weekly newspapers. Agitation and propaganda are not characteristic of the Christian unions, and their demand for publicity and propaganda literature of the political type is therefore not very great.

The German National Union of Salaried Employees controls a publishing and printing establishment in Hamburg under the name of *Hanseatische Verlagsanstalt Aktiengesellschaft*. It had a turnover in 1930 of 7,800,000 marks (\$1,856,400), having published in that year 34 books and several periodicals. In 1928 the *Hanseatische Verlagsanstalt* purchased the Munich publishing firm of *Georg Muller Verlag Aktiengesellschaft*, which publishes principally conservative books and does an annual business of over 8,000,000 marks (\$1,904,000). Finally, the union operates a monthly book service for its members somewhat similar to that of a well-known American company.

Construction and building.—The building activities of the unions began after the World War, and all three federal associations have entered the construction field through subsidiary companies controlled by them.

The *Gagfah* (*Gemeinnützige Aktiengesellschaft für Angestellten Heimstätten*) is mainly controlled by the German National Union of Salaried Employees, but some of the shares are also owned by the socialistic and democratic clerical employees' unions. From 1918 until 1930 the *Gagfah* built 26,740 apartments in 255 German cities. The turnover in 1930 was 1,000,000,000 marks (\$238,000,000), a sum of considerable importance if compared with the turnover of private

construction firms. The capital has been progressively raised from 500,000 marks (\$119,000) until it is now 6,000,000 (\$1,428,000).

Another large building association is the Dewog (*Deutsche Wohnungsfürsorge A. G. für Beamte, Angestellte und Arbeiter*) and its subsidiary company, the Gehag (*Gemeinnützige Heimstätten Spar- und Bau-Aktiengesellschaft*), both of which are entirely controlled by the unions of the German Federation of Labor Unions. In 1929 the Gehag raised its capital to 1,000,000 marks (\$238,000) and in the same year the Dewog to 3,000,000 marks (\$714,000). Up to 1929, they had both built 20,000 apartments.

The Hirsch-Duncker unions are in the construction field with their Heimat, Gemeinnützige Bau- und Siedlungs-Aktiengesellschaft, which up to 1930 had constructed 10,294 apartments in some 44 German cities. The capital was raised in 1930 from 1,000,000 to 5,000,000 marks (\$238,000 to \$1,190,000).

The active rôle of the labor unions in construction has aroused much protest from private firms, and the whole question has furnished much fuel to the German political fire.

Miscellaneous activities.—There are a number of industries and trades in which the German labor unions have taken some interest, but they are of such small importance financially that they are not mentioned here. It may be of interest, however, to state that the German Federation of Labor Unions is reported to own a bicycle factory, an office equipment and stationery manufacturing firm, and to be interested in automobile service stations.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in June, 1932

DATA regarding industrial disputes in the United States for June, 1932, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, 1929, 1930, and 1931, the number of workers involved and man-days lost for these years and for each of the months, January, 1930, to June, 1932, inclusive, as well as the number of disputes in effect at the end of each month and the number of workers involved. The number of man-days lost as given in the last column of the table refers to the estimated number of working-days lost by workers involved in disputes which were in progress during the month or year specified.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1930, TO JUNE, 1932, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS, 1927 TO 1931

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost in disputes existing in month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927: Total	734		349,434		37,790,394
1928: Total	629		357,145		31,556,947
1929: Total	903		230,463		9,975,213
1930: Total	653		158,114		2,730,368
1931: Total	894		279,299		6,386,183
1930					
January	45	21	9,240	5,316	184,730
February	52	40	37,450	6,683	438,570
March	49	38	15,017	5,957	291,127
April	64	41	6,379	5,840	189,828
May	66	29	9,329	4,386	185,448
June	59	34	14,011	8,311	144,117
July	78	30	14,308	4,815	141,647
August	51	33	15,902	7,131	142,738
September	72	44	16,337	13,778	208,184
October	47	36	10,858	16,007	335,916
November	44	29	4,390	7,759	273,608
December	26	7	4,863	5,144	194,455
1931					
January	57	19	10,150	2,905	181,169
February	52	29	20,473	10,677	223,660
March	49	26	26,453	28,012	476,904
April	73	39	27,135	22,687	770,512
May	115	46	28,000	15,603	400,509
June	90	47	18,795	15,223	511,926
July	73	51	49,434	56,683	612,864
August	79	36	11,019	14,759	1,157,013
September	117	65	36,092	37,427	493,649
October	77	45	34,384	29,380	1,052,095
November	62	39	13,219	13,690	355,818
December	50	21	4,145	1,318	150,064
1932					
January	79	37	11,105	4,648	117,298
February	50	30	31,140	28,691	417,966
March	51	28	31,966	11,660	685,949
April	73	34	17,707	20,066	572,121
May ¹	81	54	45,244	50,196	1,241,176
June ¹	46	62	12,452	22,871	950,972

¹ Preliminary figures subject to change.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry, the number of strikes beginning in April, May, and June, 1932, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN APRIL, MAY, AND JUNE, 1932

Industrial group	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	April	May	June	April	May	June
Bakers.....	3	12	—	33	1,129	—
Barbers.....	1	1	3	1,000	2,500	850
Brewery and soft-drink workers.....	—	1	—	—	10	—
Building trades.....	19	19	5	3,205	31,253	158
Chauffeurs and teamsters.....	4	7	4	529	408	404
Clerks, salesmen.....	—	—	1	—	—	30
Clothing.....	9	12	8	752	5,139	469
Farm labor.....	1	3	1	47	850	15
Food workers.....	2	1	1	90	20	70
Furniture.....	2	1	—	47	39	—
Hospital workers.....	1	—	—	41	—	—
Iron and steel.....	—	1	—	—	325	—
Light, heat, power, and water.....	—	1	—	—	100	—
Longshoremen and freight handlers.....	3	—	1	1,612	—	40
Lumber, timber, and mill work.....	4	—	1	37	—	9
Metal trades.....	1	2	1	70	257	200
Miners.....	8	4	3	7,555	1,090	5,200
Motion-picture operators, actors, and theatrical workers.....	1	1	—	57	10	—
Paper and paper-goods workers.....	—	2	3	—	743	825
Printing and publishing.....	—	—	1	—	—	45
Shipbuilding.....	—	1	—	—	300	—
Stone.....	2	—	—	80	—	—
Municipal workers.....	1	—	2	75	—	3,000
Textiles.....	5	4	5	1,048	135	609
Tobacco.....	1	—	—	22	—	—
Other occupations.....	5	8	6	1,407	936	528
Total.....	73	81	46	17,707	45,244	12,452

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in June, 1932, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN JUNE, 1932, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIAL GROUPS

Industrial group	Number of disputes beginning in June, 1932, involving—				
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Barbers.....	—	—	2	1	—
Building trades.....	2	3	—	—	—
Chauffeurs and teamsters.....	1	1	2	—	—
Clerks, salesmen.....	—	1	—	—	—
Clothing.....	3	3	2	—	—
Farm labor.....	1	—	—	—	—
Food workers.....	—	1	—	—	—
Longshoremen and freight handlers.....	—	1	—	—	—
Lumber, timber, and mill work.....	1	—	—	—	—
Metal trades.....	—	—	1	—	—
Miners.....	—	—	1	—	2
Paper and paper-goods workers.....	—	1	1	1	—
Printing and publishing.....	—	1	—	—	—
Municipal workers.....	—	—	—	1	1
Textiles.....	—	2	3	—	—
Other occupations.....	1	3	2	—	—
Total.....	9	17	14	3	3

In Table 4 are shown the number of industrial disputes ending in June, 1932, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN JUNE, 1932, BY INDUSTRIAL GROUPS AND CLASSIFIED DURATION

Industrial group	Classified duration of strikes ending in June, 1932			
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 and less than 3 months
Barbers.....	2			
Building trades.....	2		5	
Chauffeurs and teamsters.....	3	1		
Clothing.....	5		1	
Farm labor.....		1		
Food workers.....	1			
Iron and steel.....			1	
Metal trades.....	1			
Miners.....	1			1
Paper and paper-goods workers.....		1		
Shipbuilding.....		1		
Municipal workers.....	2			
Textiles.....	4			
Other occupations.....	5			
Total.....	26	4	7	1

Conciliation Work of the Department of Labor in June, 1932

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 74 labor disputes during June, 1932. These disputes affected a known total of 15,733 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

There were 18 cases involving the law on the prevailing rate of wages. In these cases it is not always possible to show the number involved, due to lack of information as to total number required before completion of construction.

On July 1, 1932, there were 39 strikes before the department for settlement and, in addition, 46 controversies which had not reached the strike stage. The total number of cases pending was 85.

INDUSTRIAL DISPUTES

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Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Telephone building, Indianapolis, Ind.	Strike	Terrazzo workers	Dispute relative to amount of wages paid to mechanics.	Adjusted. Disputed amount of wages placed in escrow for later decision.	1932 May 30	1932 June 1	10	35
Remington - Rand Corporation, Brooklyn, N. Y.	do	Employees	Additional 10 per cent wage cut.	Unable to adjust. Workers not reemployed.	do	do	25	150
Shell Oil Co., Seattle, Wash.	Controversy	Painters	Wages and union recognition.	Adjusted. Agreed to pay prevailing wage.	May 1	May 24	20	250
Building, Newark and vicinity, N. J.	do	Steamfitters and helpers.	Proposed cut.	Adjusted. Journeymen allowed \$12 per day; helpers, \$8.	May 15	June 1	750	---
Hill Baking Co., Newark, N. J.	Lockout	Bakers	Wages cut 15 to 23 per cent. Open shop.	Unable to adjust.	May 1	June 30	20	65
Jonas Baking Co., Newark, N. J.	do	do	Wage dispute.	do	do	do	14	28
Veterans Hospital, Minneapolis, Minn.	Controversy	Building workers	Prevailing-wage discussion.	Adjusted. Prevailing scale fixed and will be paid.	May 13	June 4	30	5
Federal Waterway, Grundy Co., Ill.	do	Laborers	Asked increase from 30 to 60 cents per hour and employment of local men.	Pending.	June 2	---	40	250
Carpenters, Wilkes-Barre, Pa.	Strike	Carpenters	Wages and working conditions.	do	June 3	---	(1)	---
Cleaners, dyers, pressmen, and drivers, Pittsburgh, Pa.	Controversy	Cleaners, etc.	Working conditions; 1 discharged.	Adjusted. Employee reinstated.	May 16	May 16	62	8
Climax Machine Co., Indianapolis, Ind.	do	Metal polishers	Wages cut from 95 to 75 cents per hour.	Adjusted. Accepted 75 cents per hour. May return according to seniority.	June 6	June 11	8	100
Building, Philadelphia, Pa.	Strike	Terrazzo workers	Working conditions.	Adjusted. On August 1, mechanics will receive \$10 per day; helpers \$7.	May 1	June 3	(1)	---
Employers Bakers' Association, Washington, D. C.	Controversy	Bakery-wagon salesmen.	Wages cut 20 per cent.	Adjusted. Accepted 10 per cent cut.	Apr. 20	May 27	513	---
Do.	do	Bakers and helpers	do	Adjusted. Bakers accepted 10 per cent cut; helpers, 5 per cent.	do	May 23	335	---
Post-office building, Kokomo, Ind.	do	Painters	Prevailing wage not being paid	Unable to adjust. Job completed.	May 8	June 11	38	---
Post-office building, Sturgis, Mich.	do	Laborers	Prevailing wage.	No change in wages.	June 1	June 7	(1)	---
Stone workers, Washington, D. C. and Bladensburg, Md.	Strike	Cutters, carvers, and planer men.	Wages cut 20 per cent.	Adjusted. Accepted 40 cents per hour.	Mar. 1	May 12	99	---
				Adjusted. Cutters cut 20 per cent; carvers, 19 per cent; and planer men 24 per cent.				

1 Not reported.

LABOR DISPUTES HANDLED THROUGH THE CONCILIATION SERVICE DURING THE MONTH OF JUNE, 1932—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Post-office building, Glens Falls, N. Y.	Controversy	Laborers	Prevailing-wage discussion	Adjusted. Agreed to pay 40 cents per hour.	1932 May 31	1932 June 4	(1)	-----
Miners, Avoca, Pa.	do	Miners	Wage cut	Pending	Apr. 15	-----	145	-----
Cuneo Eastern Press, Philadelphia, Pa.	Strike	Bindery workers	Asked increase from 30 to 45 cents per hour.	Unable to adjust. Places filled by others.	June 3	June 10	19	729
Spencer Coal Co., Scranton, Pa.	do	Miners	Wages cut 15 per cent.	Pending	Apr. 14	-----	200	-----
Paper-mill workers, Delair, N. J.	do	Paper-mill workers	Additional wage cut	Adjusted. Accepted 15 per cent additional cut.	June 1	June 25	525	-----
Naval Air Base, Sunnyvale, Calif.	Controversy	Electrical workers	Prevailing-wage discussion	Adjusted. Agreed on \$9 per day.	May 28	June 3	6	40
Do	do	Plumbers	do	Adjusted. Agreed on \$10 per day.	June 2	June 13	3	-----
Miners, Eynon, Pa.	Strike	Miners	Employment of new men	Pending	June 6	-----	400	700
Building, Washington, D. C.	Lockout	Carpenters	Wages cut from \$11 to \$8 per day	Adjusted. Agreed on \$11 per day.	May 1	June 2	50	3,000
Stand-pipe construction, Alameda, Calif.	Controversy	Boilermakers	Wages	Unable to adjust. (Prevailing wage law does not apply.)	June 1	June 13	10	-----
Air base, Sunnyvale, Calif.	do	do	Prevailing-wage discussion	do	do	do	10	-----
Federal building, Seattle, Wash.	do	Plasterers	Rotation of workmen on the job	Adjusted. Rotation of workers and 6-hour day.	do	June 10	10	-----
Major Baking Co., Chicago, Ill.	do	Bakery workers	Proposed wage cut of \$5 per week	Adjusted. Bakers accepted cut of \$4.50 per week. Allowed 6-hour day.	do	June 17	300	-----
Veterans Hospital, Lincoln, Nebr.	do	Building workers	Alleged that men were required to return part of each day's wages.	Adjusted. Building completed without change in wages.	June 10	June 18	(1)	-----
Post-office building, Canton, Ohio	do	Bricklayers	Alleged violation of prevailing wage scale.	Adjusted. Allowed prevailing rate, \$1.25 per hour.	June 6	June 22	40	-----
Standard Kid Co., Wilmington, Del.	do	Leather workers	Proposed wage cut 20 per cent	Adjusted. Accepted cut	June 13	June 18	275	-----
Carpenters, Allentown, Bethlehem, and Catasqua, Pa.	do	Carpenters	Wages cut	Adjusted. Accepted 12½ per cent cut.	June 7	June 21	100	10
Post-office building, Central City, Ky.	do	Bricklayers	Employment of local labor	Adjusted. Local men largely employed.	do	June 15	(1)	-----
Carlsbad Caverns, National Park, N. Mex.	do	Building workers	Prevailing-wage discussion	Adjusted. Rates fixed and will be paid.	June 10	July 20	(1)	-----
Building trades, Portland, Oreg.	do	Painters, electricians, truck drivers and plumbers.	do	do	Mar. 1	June 15	250	250
Jonas Co., Manchester, N. H.	Strike	Shoe cutters	Wages cut; asked recognition of union.	Pending	June 15	-----	50	-----

Adjusted. Rates fixed and will be paid.

Adjusted. Rates fixed and will be paid.

Adjusted. Rates fixed and will be paid.

INDUSTRIAL DISPUTES

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Location	Industry	Dispute	Allegation	Resolution	Date	Notes
Post-office building, Montgomery, Ala.	Carpenters	Controversy	Alleged violation of prevailing wage law.	Adjusted. Rates fixed and will be paid.	June 10	(1)
Textile workers, Arcadia, S. C.	Textile workers	Strike	Wage cuts; alleged discrimination.	Pending.	June 3	200
Post-office building, Greensboro, N. C.	Building workers	Controversy	Prevailing-wage discussion.	Adjusted. Rates fixed and will be paid.	June 14	(1)
Building, Jersey City and vicinity, N. J.	Carpenters	Strike	Percentage of local labor to be employed.	Adjusted. Employed 60 per cent local men.	June 8	20
Building, Minneapolis, Minn.	Building workers	Controversy	Misunderstanding as to rates.	Adjusted. All accepted cut.	May 23	250
Post-office building, Springfield, Ohio.	Common labor	do	Prevailing-wage discussion.	Adjusted. Allowed 41 cents per hour.	June 20	15
Post-office building, Thermopolis, Wyo.	Building workers	do	do	Adjusted. Rates fixed.	June 27	12
Stonecutters, Providence, R. I.	Stonecutters	Strike	Working conditions.	Pending.	Apr. 1	20
R. B. McEwen & Sons, Whippany, N. J.	Paper-board workers	do	Cut 10 cents per hour; board makers to 30.	Adjusted. Accepted 5 cents cut per hour.	June 16	90
do	Laborers	do	Cut 10 cents per hour.	do	June 13	130
Federal Building, Seattle, Wash.	Building laborers	Controversy	Wage scale.	Adjusted. Agreed on \$5.60 per day; contractor to pick crew.	May 31	100
do	Operating engineers	do	do	Adjusted. Wages to be the same as at Wright Field.	June 15	2
Barracks, Patterson Field, Ohio.	Carpenters and painters	do	Alleged violation of working agreement.	Adjusted. Satisfactory settlement.	June 1	25
Post-office building, Rochester, Pa.	Carpenters and cement workers.	Strike	Setting of tile floors.	Adjusted. Work awarded to carpenters.	June 15	40
Arsenal Building and Mifflin School, Pittsburgh, Pa.	Plasterers	do	Wages cut from \$13.30 to \$8 per day.	Pending.	June 18	25
Bus drivers, Pittsburgh, Pa.	Bus drivers	Controversy	Wages cut 10 per cent.	Adjusted.	June 22	60
do	do	Strike	do	Cut withdrawn.	June 22	42
Jersey City, and Bayonne, N. J.	Building	Controversy	Prevailing-wage scale.	Pending.	June 20	(1)
Veterans Hospital, Wichita, Kans.	Taxicab drivers	do	Working conditions.	Unclassified. Mediation not practicable.	June 17	
Taxicab drivers, Cincinnati, Ohio.	Building	do	do	Pending.	June 15	75
Waukegan Pier, Waukegan, Ill.	Iron workers	do	Violation of 8-hour day.	Adjusted. Will observe law.	June 26	10
Dam construction, Davenport, Iowa.	Barbers	do	Wage dispute.	Adjusted. Guaranteed \$20 per week, 60 per cent of all over \$31 earned on chair, \$5 for Saturday, 5 1/2-hour week.	June 28	514
Barbers, Portland, Oreg.	Knitters and finishers.	do	Refused to accept 15 per cent cut.	Adjusted. Accepted 10 per cent cut.	June 1	250
Sioux Sportswear, New York, N. Y.	Cutters and finishers.	Strike	Three cutters discharged.	Adjusted. Cutters reinstated.	May 27	40
Rubner Underwear Co., Richmond Hill, L. I., N. Y.	Dressmakers	do	Cut in piecework.	No Saturday work.	June 23	13
I. Q. S. Dress Co., Mount Vernon, N. Y.	Building	do	Prevailing-wage discussion.	Adjusted. Cut withdrawn.	June 11	25
Post-office building, Hempstead, Long Island, N. Y.	Longshoremen	Controversy	Alleged discrimination.	Pending.	June 4	(1)
Federal Barge Line, Mobile, Ala.	Granite cutters.	do	Dispute relative to compensation insurance.	Adjusted. Additional men employed; no discrimination.	June 15	75
Granite cutters, Quincy, Mass.	do	Strike	do	Pending.	June 27	400

¹ Not reported.

LABOR DISPUTES HANDLED THROUGH THE CONCILIATION SERVICE DURING THE MONTH OF JUNE, 1932—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
					1932 May 15	1932	142	1,500
General Materials Co., St. Louis, Mo.	Lockout	Employees	Working conditions	Pending				
Post-office building, Montrose, Colo.	Controversy	Bricklayers and masons	Failure to pay prevailing wage	Adjusted. Rate fixed at \$10.50 for 8-hour day.	Jan. 1	June 29	7	20
Post-office building, Wisconsin Rapids, Wis.	do	Common labor	Prevailing-wage discussion	Adjusted. Rate fixed at 35 cents per hour.	June 25	July 1	(1)	---
Federal building, Lewisburg, Pa.	do	Bricklayers	do	Adjusted. Allowed \$1.50 per hour.	June 15	June 22	22	50
Standard Commercial Body Corp., New York, N. Y.	Strike	Automobile-body workers	Additional wage cut 10 per cent	Adjusted. Accepted cuts. Company agreed to restore wages when practicable.	June 27	June 28	45	55
Post-office building, Ann Arbor, Mich.	Controversy	Laborers and iron workers	Prevailing-wage discussion	Pending	June 1		90	260
I. Cohen & Sons, Brooklyn, N. Y.	Strike	Milk-wagon drivers	Long hours, conditions, etc	Adjusted. Shorter hours and committee on conditions appointed.	June 24	June 26	26	7
Western Coal Mining Corp., Pittsburg, Kans.	Controversy	Miners	Wages cut 25 per cent	Pending	June 25		(1)	---
Shell Oil Co., Portland, Oreg.	do	Oil-truck drivers	Wages and working conditions	do	June 20		25	---
Total							7,057	8,676

1 Not reported.

LABOR AWARDS AND DECISIONS

Colorado Industrial Commission Disapproves Wage Reduction in Coal Industry

THE Colorado Fuel & Iron Co. notified the Industrial Commission of Colorado of its intention to reduce by 15 per cent, effective June 16, 1932, the wages and salaries of all employees of the company and its subsidiaries, except the employees of the Colorado & Wyoming Railway Co. (members of the railroad brotherhoods).

Stating that they were unable to earn a living even at the present wages, 695 employees of the company signed a petition protesting any reduction in wages.

The commission held hearings at Walsenburg, June 13, 1932, and at Trinidad, June 14, 1932. At these hearings the company gave the following reasons for making the proposed reduction in the wages of its employees:

The employer contends that it operates the largest steel plant in the West and is the largest producer of coal in Colorado; that the steel plants operating in the eastern part of the United States have made a reduction of 15 per cent in the wages of their employees; that therefore it is necessary that this company make a like reduction in order to meet competition; that many of the eastern steel plants ship their products to the Pacific coast through the Panama Canal and undersell the Colorado manufacturers of steel; that there is not as large a demand for iron and steel in the West as there is in the eastern part of our country, due in a large measure to a much smaller population; that under present conditions this company finds it impossible to ship any of its products east of the Missouri River; that 50 per cent of the coal produced in its mines is used in the steel plant in Colorado; that there is no market in Denver for southern Colorado coal, because lignite coal is cheaper and has the advantage of lower freight rates, and that competition in coal from the nonunion coal fields of Arkansas, Oklahoma, and other nonunion coal fields makes it impossible to sell coal in many places where it was sold in former years; that it has more employees than jobs; that many of its coal mines are shut down permanently; that it is necessary to make the proposed reduction if it is to continue to operate its mines; that this 15 per cent reduction includes the executive officers and all the employees except the employees of the Colorado & Wyoming Railroad, who are members of the railroad brotherhoods.

Many of the employees testified that they earned only from \$25 to \$55 a month under the present wage scales, and that it would be impossible for them to live if their wages were reduced 15 per cent as proposed—a statement which was borne out by a number of wage statements examined by the commission. The commission also found that a large majority of these employees were married men with from two to six children, and that many were in debt to the company store.

The findings of the commission are as follows:

We can see some reason why a reduction in the wages of the employees of the steel plant might possibly be justified; however, we can not see any reason for or justice in the proposition to reduce the wages of the employees in the coal

mines 15 per cent, when the evidence shows these men are not receiving a living wage under the present wage scale. We can not understand how they can live if the proposed reduction in the wage scale is put into effect. The Colorado Fuel & Iron Co. is the first company to propose this 15 per cent reduction in wages. Naturally, its action will force the other bituminous coal mine operators to do the same thing. Since this notice was filed with the commission by this company we have received several proposals for wage reductions from the large producers of bituminous coal. The condition existing among these miners is deplorable and will be much worse when this reduction is put into effect; slowly the coal miner is being driven into industrial slavery. If the coal companies would make an effort to stabilize coal prices and would discontinue the cutting of prices, it would seem to us that they could pay a living wage to their employees, and, in a measure, lighten the human price of coal.

The employer informs the commission that the 15 per cent reduction includes the executive officers of the company as well as the men employed in the mines. We do not believe it is fair or just to reduce the wages of the men receiving less than a living wage and then reduce the salaries of the executive officers only in the same per cent. The officers are undoubtedly receiving large salaries and if the company wishes to reduce expenses we would suggest that it should first reduce the salaries of those men who can stand a reduction of a much larger per cent than the men who are not making a living wage.

The award of the commission, rendered June 17, 1932, disapproved the proposed reduction.

COOPERATION

District of Columbia Credit Union Law

THE incorporation of credit unions within the District of Columbia is provided for by Public Act No. 190, approved June 23, 1932. At the beginning of 1931 there were 32 States ¹ which had authorized the formation of credit unions, and during the year three additional States ² enacted legislation on the subject. The District of Columbia law is therefore the thirty-sixth enactment in this field.

This new law follows the general form of the credit union laws passed in the various States. Its only unusual feature is that whereas without exception the other credit union laws prohibit loans to any except members of the organization, the District of Columbia law includes among the duties of the board of directors that of determining the "maximum loans other than loans to members."

An analysis of the act is given below:

CREDIT UNION ACT OF DISTRICT OF COLUMBIA

Scope and purpose.—Promotion of thrift among members and creation of a source of credit for them for provident purposes.

Number who may organize.—Seven or more persons residing in the District or employed therein.

Filing articles of incorporation.—With recorder of deeds.

Limitation on membership.—Restricted to groups whose members reside, do business, or are employed in the District, and either have a common bond of occupation or association or reside within a well-defined neighborhood or community.

Value of share.—Not to exceed \$10.

Stock ownership per member.—Not to exceed 200 shares.

Management.—Not less than 5 directors, credit committee of not less than 3, and supervisory committee of 3. Officers to be president, vice president, clerk, and treasurer (last two may be combined), elected by and from directors. No director or committee member may receive any compensation for his services.

Investment of funds.—May invest not to exceed 25 per cent of capital in shares of building and loan associations and of other credit unions, and in any investment legal for savings banks and trust funds.

Right to borrow.—Restricted to amount not exceeding 40 per cent of "paid-in and unimpaired capital."

Meetings.—Annually, in January. Special meetings as by-laws provide.

Voting.—Each member one vote.

Vote by proxy.—Prohibited, but an organization which is a member may cast its vote through a delegate.

Loans.—For provident purposes only. Application must be on form provided, and must state purpose for which desired, and security, if any, offered. All members of credit committee must be present, and loans must be approved by a majority of the committee.

Maximum amount of loan.—Unsecured, \$50.

¹ For a discussion of legislation relating to credit societies in these 32 States see Bulletin No. 531 of this bureau (Ch. VIII).

² Arkansas (Acts of 1931, No. 161), Colorado (Acts of 1931, ch. 80), and Ohio (Acts of 1931, p. 581).

Security for loans.—Indorsed note or assignment of shares is accepted as security.

Loans to and indorsements by directors, officers, and members of committees.—Loans only to amount of shares; indorsements prohibited.

Interest on loans.—Not to exceed 1 per cent a month, computed on unpaid balances.

Reserve fund.—Shall consist of all entrance fees and fines, plus 20 per cent of net earnings each year.

Dividends.—Payable annually on recommendation of directors, on all paid-up shares outstanding.

Taxation.—Exempt except for real estate taxes and license tax of \$15 per year.

Use of name "credit union."—Prohibited unless organized under act, in which case it must be used.

Condition of Labor Banks, June, 1932

ON JUNE 30, 1932, only 7 labor banks were still in operation. These had combined deposits of \$22,662,514 and total resources of \$28,564,797. This is a decrease of 4 banks since the same date of 1931. During the year the Federation Bank & Trust Co. at New York City, the Labor National Bank at Jersey City, the American Bank at Toledo, and the Labor National Bank at Three Forks, Mont., closed. It is reported in the press, however, that the first named of the above banks has reorganized and applied for permission to begin business again.

The details for the various banks, shown in the following table, were furnished by Prof. J. Douglas Brown, Industrial Relations Section, Princeton University.

CONDITION OF LABOR BANKS, JUNE 30, 1932

Name and location of bank	Capital	Surplus and undi- vided profits	Deposits	Total re- sources
Telegraphers' National Bank, St. Louis, Mo.....	\$500,000	\$197,486	\$5,265,238	\$6,482,523
Labor National Bank, Paterson, N. J.....	300,000	163,692	4,351,018	5,708,400
Amalgamated Bank of New York, N. Y.....	650,000	577	4,691,389	5,587,168
Mount Vernon Savings Bank, Washington, D. C.....	400,000	157,917	3,576,986	4,356,439
Union National Bank, Newark, N. J.....	375,000	212,447	2,502,608	3,612,306
Amalgamated Trust & Savings Bank, Chicago, Ill.....	200,000	151,277	1,989,226	2,396,892
United Labor Bank & Trust Co., Indianapolis, Ind.....	112,500	22,500	286,049	421,049
Total.....	2,537,500	905,896	22,662,514	28,564,797

LABOR TURNOVER

Labor Turnover in Manufacturing Establishments

THIS article presents quarterly labor turnover rates for manufacturing as a whole and for 10 separate manufacturing industries for the second quarter of 1932.

At the end of 1931, the bureau decided to discontinue the publication of monthly turnover rates. While data were collected monthly during the first quarter of 1932, the data were combined to get quarterly figures. Data for the second quarter were collected at the end of the quarter.

The rates here published therefore represent the number of changes per 100 employees that took place in a 3-month period. The data for 1931 have been recast to quarterly rates.

The average used for compiling turnover rates by the Bureau of Labor Statistics is the weighted arithmetic mean. The indexes for manufacturing as a whole were compiled from reports to the bureau from representative establishments in approximately 148 census industry classifications. These firms employ over 1,000,000 people. In the 10 industries for which separate indexes are presented, reports were received from representative plants employing at least 25 per cent of the employees in each industry as shown by the Census of Manufactures of 1927.

The net turnover rate shown in the table means the rate of replacement. It is the number of jobs that are vacated and filled per 100 employees. In a plant that is increasing its force the net turnover rate is the same as the separation rate, because while more people are hired than are separated from their jobs, the number hired above those leaving is due to expansion and can not be justly charged to turnover. On the other hand, in a plant that is reducing its number of employees, the net turnover rate is the same as the accession rate, for while more people are separated from the pay roll than are hired, the excess of separations over accessions is due to a reduction of force, and therefore, can not be logically charged as turnover expense.

As the data for turnover rates are based on returns from a limited number of establishments, these rates should not be confused with the indexes of changes in employment, as compiled and published monthly by the Bureau of Labor Statistics based on reports from a much larger number of establishments.

Table 1 shows for all industries the total separation rate, subdivided into the quit, discharge, and lay-off rate, together with the accession rate and net turnover rate per quarter for 1931 and 1932. In the six quarters shown in the table the net turnover rate varied from 9.68 employees per 100 in the last quarter of 1931 to 7.80 per 100 in the second quarter of 1932. In the second quarter the quit

rate, the discharge rate, and the accession rate were each lower than in any of the preceding five quarters, while the lay-off rate was decidedly higher.

TABLE 1.—QUARTERLY TURNOVER RATES IN SELECTED FACTORIES IN 148 INDUSTRIES

Period	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total separation					
	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932
First quarter.....	2.43	2.28	0.66	0.58	5.45	8.18	8.54	11.04	9.53	9.65	8.54	9.65
Second quarter.....	3.28	2.15	.81	.49	8.29	12.92	12.38	15.56	8.23	7.80	8.23	7.80
Third quarter.....	3.32	-----	.71	-----	10.07	-----	14.10	-----	9.27	-----	9.27	-----
Fourth quarter.....	2.37	-----	.54	-----	10.65	-----	13.56	-----	9.68	-----	9.68	-----

Table 2 shows the quit, discharge, lay-off, accession, and net turnover rates for automobiles; boots and shoes; brick; cotton; iron and steel; foundry and machine shops; furniture; men's clothing; sawmills; and slaughtering and meat packing; for the second quarter of 1931, and for the first and second quarters of 1932.

The highest quarterly turnover rate in the second quarter of 1932 was 24.04 per 100 employees in brick manufacture. The next highest rate was 21.22 in sawmills. The lowest turnover rate was 3.15 in the iron and steel industry.

Men's clothing had the highest quit rate during the second quarter of 1932. The lowest quit rate was shown in brick manufacturing. The highest discharge rate occurred in slaughtering and meat packing, and the lowest in men's clothing. The highest lay-off rate was shown in brick and the lowest in the boot and shoe industry. The highest accession rate occurred in the brick industry and the lowest in iron and steel.

TABLE 2.—QUARTERLY TURNOVER RATES IN SPECIFIED INDUSTRIES

Class of rates	Second quarter, 1931	First quarter, 1932	Second quarter, 1932	Second quarter, 1931	First quarter, 1932	Second quarter, 1932
	Automobiles			Boots and shoes		
Quit.....	3.82	3.42	2.65	5.17	3.77	2.59
Discharge.....	1.06	.91	.43	1.31	.99	.50
Lay-off.....	14.51	12.27	15.77	5.77	4.52	8.81
Total separation.....	19.39	16.61	18.85	12.25	9.28	11.90
Accession.....	11.69	19.39	22.02	14.45	13.93	4.41
Net turnover.....	11.69	16.61	18.85	12.25	9.28	4.41
	Brick			Cotton manufacturing		
Quit.....	3.46	1.06	0.84	4.41	3.46	2.56
Discharge.....	1.70	1.49	.55	1.26	.92	.74
Lay-off.....	18.50	29.73	32.19	7.05	7.69	22.02
Total separation.....	23.66	32.28	33.58	12.72	12.07	25.32
Accession.....	22.97	21.53	24.04	11.78	13.48	5.67
Net turnover.....	22.97	21.53	24.04	11.78	12.07	5.67
	Foundries and machine shops			Furniture		
Quit.....	2.43	1.24	0.97	3.06	1.65	1.18
Discharge.....	.87	.39	.39	1.19	.77	.42
Lay-off.....	12.64	9.67	12.32	13.83	16.40	19.38
Total separation.....	15.94	11.30	13.68	18.08	18.82	20.98
Accession.....	7.52	8.69	5.79	13.30	12.32	10.86
Net turnover.....	7.52	8.69	5.79	13.30	12.32	10.86
	Iron and steel			Men's clothing		
Quit.....	2.62	1.63	1.94	4.11	2.97	3.25
Discharge.....	.41	.16	.17	.50	.31	.12
Lay-off.....	6.68	4.23	10.94	4.25	6.41	15.28
Total separation.....	9.71	6.02	13.05	8.86	9.69	18.65
Accession.....	4.48	4.32	3.15	10.36	10.29	6.54
Net turnover.....	4.48	4.32	3.15	8.86	9.69	6.54
	Sawmills			Slaughtering and meat packing		
Quit.....	4.65	2.31	2.27	4.12	3.18	2.77
Discharge.....	1.29	1.24	.98	1.41	1.19	.99
Lay-off.....	22.26	18.04	20.70	13.01	19.81	17.16
Total separation.....	28.20	21.59	23.95	18.54	24.18	20.92
Accession.....	21.62	19.70	21.22	19.36	16.68	20.85
Net turnover.....	21.62	19.70	21.22	18.54	16.68	20.85

HOUSING

Building Permits in Principal Cities of the United States, June, 1932

INDICATED expenditures for total building operations in June, 1932, were \$49,452,379 in 354 cities from which reports were received by the Bureau of Labor Statistics. This is 26.3 per cent less than the indicated expenditures for total building operations in these cities during May, 1932.

Indicated expenditures for new residential building increased three-tenths of 1 per cent, while the estimated expenditures for new nonresidential building decreased 38.3 per cent.

There was an increase of 2.7 per cent in the indicated expenditures for additions, alterations, and repairs in these cities comparing June permits with May permits.

During June, 1932, there were 2,488 family dwelling units provided in new buildings. This is 5.9 per cent fewer dwelling units than were provided in new buildings for which permits were issued during May.

Building permit reports were received by the Bureau of Labor Statistics from 354 identical cities of the United States having a population of 25,000 or over for the months of May and June, 1932, and from 343 identical cities for the months of June, 1931, and June, 1932. The cost figures as shown in the following tables apply to the cost of the buildings as estimated by the prospective builder on applying for his permit to build. No land costs are included. Only building projects within the corporate limits of the cities enumerated are shown. The States of Illinois, Massachusetts, New York, New Jersey, and Pennsylvania, through their departments of labor, are cooperating with the United States Bureau of Labor Statistics in the collection of these data.

Comparisons, May and June

TABLE 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 354 identical cities of the United States, by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 354 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN MAY AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	May, 1932	June, 1932	Per cent of change	May, 1932	June, 1932	Per cent of change
New England.....	\$1,099,123	\$1,621,635	+47.5	\$1,210,951	\$1,804,859	+49.0
Middle Atlantic.....	2,508,543	3,155,915	+25.8	9,320,769	8,599,258	-7.7
East North Central.....	1,492,092	1,320,295	-11.5	3,884,477	2,759,434	-29.0
West North Central.....	1,081,855	820,245	-24.2	2,494,668	2,222,774	-10.9
South Atlantic.....	1,262,178	1,186,677	-6.0	23,906,478	10,646,538	-55.5
South Central.....	531,080	404,474	-23.8	3,573,064	1,176,157	-67.1
Mountain and Pacific.....	2,112,430	1,612,410	-23.7	2,560,349	1,777,061	-30.6
Total.....	10,087,301	10,121,651	+0.3	46,950,756	28,986,081	-38.3

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 354 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN MAY AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS—Continued

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Number of cities
	May, 1932	June, 1932	Per cent of change	May, 1932	June, 1932	Per cent of change	
New England.....	\$1,321,745	\$1,084,709	-17.9	\$3,631,819	\$4,511,203	+24.2	53
Middle Atlantic.....	3,256,186	3,609,832	+10.9	15,085,498	15,365,005	+1.9	70
East North Central.....	1,746,797	1,441,043	-17.5	7,123,366	5,520,772	-22.5	94
West North Central.....	542,943	782,911	+44.2	4,119,466	3,825,930	-7.1	25
South Atlantic.....	1,263,814	1,436,182	+13.6	26,432,470	13,269,397	-49.8	40
South Central.....	578,291	613,130	+6.0	4,682,435	2,193,761	-53.1	34
Mountain and Pacific.....	1,366,278	1,376,840	+0.8	6,039,057	4,766,311	-21.1	38
Total.....	10,076,054	10,344,647	+2.7	67,114,111	49,452,379	-26.3	354

New residential buildings showed an increase of three-tenths of 1 per cent in estimated expenditures, comparing June permits with May permits. The increase was confined to two divisions, the New England and the Middle Atlantic. The other five geographic divisions showed decreases. Only one geographic division, the New England, showed an increase in estimated expenditures for new nonresidential buildings. There was an increase of 2.7 per cent in the indicated expenditures for additions, alterations, and repairs. Five geographic divisions registered increases in the indicated expenditures for this class of building operations. The increases ranged from eight-tenths of 1 per cent in the Mountain and Pacific States to 44.2 per cent in the West North Central States.

The New England States and the Middle Atlantic States registered increases in the estimated cost of total building operations comparing June permits with May permits. Decreases were shown in each of the other five geographic divisions.

Table 2 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 354 identical cities of the United States, by geographic divisions.

TABLE 2.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 354 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN MAY AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
New England.....	217	215	750	701	2,363	2,116	3,330	3,032
Middle Atlantic.....	448	393	1,632	1,479	5,218	5,032	7,298	6,904
East North Central.....	319	259	1,774	1,453	3,395	2,867	5,488	4,579
West North Central.....	290	215	950	673	1,445	1,064	2,685	1,952
South Atlantic.....	292	263	616	569	3,039	2,872	3,947	3,704
South Central.....	227	181	435	420	1,742	1,371	2,404	1,972
Mountain and Pacific.....	551	456	1,166	1,049	3,286	3,237	5,003	4,742
Total.....	2,344	1,982	7,323	6,344	20,488	18,559	30,155	26,885
Per cent of change.....		-15.4		-13.4		-9.4		-10.8

Comparing permits issued in June, 1932, with those issued in May, 1932, there was a decrease of 15.4 per cent in the number of new residential building, a decrease of 13.4 per cent in the number of new nonresidential building, a decrease of 9.4 per cent in the number of additions, alterations, and repairs, and a decrease of 10.8 per cent in the number of total building operations. All geographic divisions showed decreases in the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and in the number of total buildings for which permits were issued.

Table 3 shows the number of families provided for in the different kinds of housekeeping dwellings, together with the estimated cost of such dwellings, for which permits were issued in 354 identical cities during May and June, 1932, by geographic divisions.

TABLE 3.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 354 IDENTICAL CITIES IN MAY AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
New England.....	\$868,723	\$838,135	184	187	\$183,900	\$156,500	59	46
Middle Atlantic.....	1,882,593	1,417,103	372	318	554,450	401,512	140	106
East North Central.....	1,323,292	1,166,095	297	242	153,600	130,200	38	30
West North Central.....	952,655	784,995	272	209	79,400	25,750	24	10
South Atlantic.....	1,188,078	1,051,977	283	246	16,900	2,000	8	3
South Central.....	406,305	375,784	202	172	70,175	20,225	40	14
Mountain and Pacific....	1,860,505	1,281,960	510	426	152,525	100,950	58	40
Total.....	8,482,151	6,916,049	2,120	1,800	1,211,150	837,137	367	249
Per cent of change.....		-18.5		-15.1		-30.9		-32.2

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
New England.....	\$18,000	\$27,000	6	10	\$1,070,623	\$1,021,635	249	243
Middle Atlantic.....	71,500	1,337,300	18	265	2,508,543	3,155,915	530	689
East North Central.....	15,000	24,000	4	3	1,492,092	1,320,295	339	275
West North Central.....	46,800	9,500	19	4	1,078,855	820,245	315	223
South Atlantic.....	57,200	128,000	35	63	1,262,178	1,181,977	326	312
South Central.....	54,600	8,465	37	6	531,080	404,474	279	192
Mountain and Pacific....	93,400	199,500	38	88	2,106,430	1,582,410	606	554
Total.....	356,500	1,733,765	157	439	10,049,801	9,486,951	2,644	2,488
Per cent of change.....		+386.3		+179.6		-5.6		-5.9

Comparing permits issued in June, 1932, with those issued in May, 1932, in these 354 identical cities, there was a decrease of 5.9 per cent in the indicated expenditures for all kinds of housekeeping dwellings and a decrease of 5.6 per cent in the number of family dwelling units provided in these dwellings. The Middle Atlantic was the only geographic division registering an increase in indicated expenditures

for housekeeping dwellings and the only division registering an increase in the number of family dwelling units provided, comparing June with May.

Expenditures for 1-family dwellings decreased 18.5 per cent and the number of families provided for in 1-family dwellings decreased 15.1 per cent comparing these two periods. All geographic divisions showed decreases in expenditures for 1-family dwellings. All divisions, except the New England, showed decreases in the number of families provided for in this class of structure.

Decreases were shown in indicated expenditures for 2-family dwellings in each of the seven geographic divisions, and also for the number of families provided for in this class of dwelling.

There was an increase of 386.3 per cent in the indicated expenditures for apartment houses and an increase of 179.6 per cent in the number of family dwelling units provided for in apartment houses comparing June permits with May permits in these cities. This large increase was mostly accounted for by the increase in the Middle Atlantic States. However, five of the seven geographic divisions registered increases in expenditures for apartment houses.

Table 4 shows the index number of families provided for and the index numbers of indicated expenditures for new residential building, for new nonresidential building, for additions, alterations, and repairs, and for total building operations.

TABLE 4.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF THE ESTIMATED COST OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES

[Monthly average, 1929=100]

Month	Families provided for	Estimated cost of—			
		New residential buildings	New non-residential buildings	Additions, alterations, and repairs	Total building operations
June..... 1930	54.4	45.1	82.5	74.6	63.3
June..... 1931	43.4	33.4	41.7	56.5	39.4
January..... 1932	14.4	10.2	25.0	25.8	18.2
February.....	13.0	9.1	16.5	26.7	14.3
March.....	15.4	10.7	18.1	27.0	15.7
April.....	13.4	9.7	25.0	32.0	18.8
May.....	11.3	7.9	39.3	27.3	23.3
June.....	10.6	7.9	24.3	28.0	17.2

The index number of total building operations for June, 1932, was less than for either May, 1932, or June, 1931. The index numbers of families provided for and of new nonresidential buildings were also considerably lower than for either June, 1931, or May, 1932. The index number for new residential buildings was the same as for May, 1932, but less than one-fourth of that for June, 1931.

Comparisons of Indicated Expenditures for Public Buildings

TABLE 5 shows the number and value of contracts awarded for public buildings by the different agencies of the United States Government during the months of June, 1931, and May and June, 1932.

TABLE 5.—CONTRACTS LET FOR PUBLIC BUILDINGS BY DIFFERENT AGENCIES OF THE UNITED STATES GOVERNMENT DURING JUNE, 1931, AND MAY AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	June, 1931		May, 1932		June, 1932 ¹	
	Number	Cost	Number	Cost	Number	Cost
New England.....	15	\$1,201,064	4	\$154,539	11	\$685,114
Middle Atlantic.....	16	867,109	23	2,429,919	37	4,096,461
East North Central.....	16	1,211,009	16	555,873	34	1,090,653
West North Central.....	3	165,963	7	822,368	16	1,779,413
South Atlantic.....	45	4,196,442	27	22,788,654	54	10,159,555
South Central.....	15	1,241,636	21	2,282,176	23	250,147
Mountain and Pacific.....	39	2,712,194	17	285,909	48	1,364,339
Total.....	149	11,595,417	125	29,319,438	223	19,425,682

¹ Subject to revision.

Contracts were awarded during June, 1932, by the various agencies of the Federal Government for 221 buildings to cost \$19,425,682. This is considerably less than the valuation of buildings for which contracts were awarded in May, 1932, but nearly twice as much as the value of buildings for which contracts were awarded in June, 1931.

Table 6 shows the value of contracts awarded by the different State governments for public buildings during the months of June, 1931, and May and June, 1932, by geographic divisions.

TABLE 6.—CONTRACTS AWARDED FOR PUBLIC BUILDINGS BY THE DIFFERENT STATE GOVERNMENTS DURING JUNE, 1931, AND MAY AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	June, 1931	May, 1932	June, 1932 ¹
New England.....	\$175,601	\$99,100	\$703,926
Middle Atlantic.....	2,056,025	456,812	536,687
East North Central.....	828,090	320,398	363,105
West North Central.....	914,390	613,656	107,773
South Atlantic.....	981,568	708,765	244,211
South Central.....	47,787	400,653	232,977
Mountain and Pacific.....	230,634	243,502	555,013
Total.....	5,234,095	2,842,886	2,743,692

¹ Subject to revision.

During June, 1932, contracts were awarded by the various State governments for buildings to cost \$2,743,692. This is slightly lower than the value of contracts awarded in May and less than one-half of the value of contracts awarded during June, 1931.

Whenever a contract is awarded by either the Federal Government or by a State government in a city having a population of 25,000 or over, the number or cost of such building is shown in the various tables in this article.

Comparisons, June, 1932, with June, 1931

TABLE 7 shows the estimated cost of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 343 identical cities of the United States having a population of 25,000 or over for the months of June, 1931, and June, 1932, by geographic divisions.

TABLE 7.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 343 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN JUNE, 1931, AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	June, 1931	June, 1932	Per cent of change	June, 1931	June, 1932	Per cent of change
New England.....	\$3, 153, 770	\$1, 573, 335	-50. 1	\$3, 435, 551	\$1, 757, 614	-48. 8
Middle Atlantic.....	19, 687, 886	3, 125, 815	-84. 1	13, 741, 032	8, 507, 977	-38. 1
East North Central.....	5, 011, 500	1, 320, 295	-73. 7	8, 037, 573	2, 758, 959	-65. 7
West North Central.....	2, 214, 023	820, 245	-63. 0	4, 600, 844	2, 222, 774	-51. 7
South Atlantic.....	3, 015, 500	1, 158, 065	-61. 6	4, 417, 427	10, 641, 937	+140. 9
South Central.....	2, 103, 474	404, 474	-80. 8	2, 528, 430	1, 173, 307	-53. 6
Mountain and Pacific.....	5, 719, 277	1, 589, 310	-72. 2	7, 265, 056	1, 755, 466	-75. 8
Total.....	40, 905, 430	9, 991, 539	-75. 6	44, 025, 913	28, 818, 034	-34. 5

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Num- ber of cities
	June, 1931	June, 1932	Per cent of change	June, 1931	June, 1932	Per cent of change	
New England.....	\$2, 103, 253	\$1, 075, 385	-48. 9	\$8, 692, 574	\$4, 406, 334	-49. 3	50
Middle Atlantic.....	5, 613, 769	3, 594, 111	-36. 0	39, 042, 687	15, 227, 903	-61. 0	68
East North Central.....	3, 354, 788	1, 440, 443	-57. 1	16, 403, 861	5, 519, 697	-66. 4	93
West North Central.....	1, 076, 890	782, 911	-27. 3	7, 891, 757	3, 825, 930	-51. 5	25
South Atlantic.....	2, 254, 331	1, 374, 927	-39. 0	9, 687, 258	13, 174, 929	+36. 0	38
South Central.....	1, 054, 854	612, 452	-41. 9	5, 686, 758	2, 190, 233	-61. 5	33
Mountain and Pacific.....	2, 528, 698	1, 368, 120	-45. 9	15, 513, 031	4, 712, 896	-69. 6	36
Total.....	17, 986, 583	10, 248, 349	-43. 0	102, 917, 926	49, 057, 922	-52. 3	343

Indicated expenditures for new residential buildings decreased 75.6 per cent comparing permits issued in June, 1932, with those issued in June, 1931, in these 343 identical cities. Decreases ranging from 50.1 per cent in the New England States to 84.1 per cent in the Middle Atlantic States were shown in all geographic divisions. There was a decrease of 34.5 per cent in indicated expenditures for new nonresidential buildings. All geographic divisions, except the South Atlantic, registered decreases in indicated expenditures for nonresidential buildings. There was, however, an increase of 140.9 per cent in the South Atlantic division. All geographic divisions showed decreases in expenditures for additions, alterations, and repairs. The average for the seven divisions being 43.0 per cent. The South Atlantic was the only division showing an increase in indicated expenditures for total construction. The decrease for the 343 cities was 52.3 per cent.

Table 8 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 343 identical cities having a population of 25,000 or over for June, 1931, and June, 1932, by geographic divisions.

Decreases were shown in the number of new residential buildings, in the number of new nonresidential buildings, in the number of additions, alterations, and repairs, and in the number of total buildings in each geographic division, comparing permits issued in June, 1932, with those issued in June, 1931.

Table 9 shows the number of families provided for in the different kinds of housekeeping dwellings, together with the cost of such

dwellings, for which permits were issued for 343 identical cities, during June, 1931, and June, 1932, by geographic divisions.

TABLE 8.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 343 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN JUNE, 1931, AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	June, 1931	June, 1932	June, 1931	June, 1932	June, 1931	June, 1932	June, 1931	June, 1932
New England.....	461	207	971	673	2,541	2,095	3,973	2,975
Middle Atlantic.....	1,436	388	2,542	1,458	5,377	4,996	9,355	6,842
East North Central.....	851	259	2,475	1,448	4,241	2,864	7,567	4,571
West North Central.....	504	215	1,005	673	1,238	1,064	2,747	1,952
South Atlantic.....	541	249	881	551	3,497	2,784	4,919	3,584
South Central.....	509	181	601	417	1,901	1,367	3,011	1,965
Mountain and Pacific.....	1,179	449	1,404	1,031	3,824	3,205	6,407	4,685
Total.....	5,481	1,948	9,879	6,251	22,619	18,375	37,979	26,574
Per cent of change.....		-64.5		-36.7		-18.8		-30.0

TABLE 9.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 343 IDENTICAL CITIES IN JUNE, 1931, AND JUNE, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	June, 1931	June, 1932	June, 1931	June, 1932	June, 1931	June, 1932	June, 1931	June, 1932
New England.....	\$2,310,370	\$789,835	383	179	\$509,600	\$156,500	126	46
Middle Atlantic.....	7,645,644	1,387,003	1,157	313	1,456,942	401,512	381	106
East North Central.....	4,062,378	1,166,095	769	242	494,122	130,200	121	30
West North Central.....	1,992,398	784,995	483	209	89,500	25,750	26	10
South Atlantic.....	2,589,300	1,023,365	509	232	106,000	2,000	33	3
South Central.....	1,535,439	375,784	449	172	228,060	20,225	102	14
Mountain and Pacific.....	3,944,504	1,258,860	1,016	419	614,403	100,950	180	40
Total.....	24,080,033	6,785,937	4,766	1,766	3,498,627	837,137	969	249
Per cent of change.....		-71.8		-62.9		-76.1		-74.3

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	June, 1931	June, 1932	June, 1931	June, 1932	June, 1931	June, 1932	June, 1931	June, 1932
New England.....	\$216,800	\$27,000	85	10	\$3,036,670	\$973,335	594	235
Middle Atlantic.....	9,935,300	1,337,300	2,756	265	19,037,886	3,125,815	4,294	684
East North Central.....	345,000	24,000	97	3	4,901,500	1,320,295	987	275
West North Central.....	132,125	9,500	83	4	2,214,023	820,245	592	223
South Atlantic.....	316,200	128,000	126	63	3,011,500	1,153,365	668	298
South Central.....	29,975	8,465	24	6	1,793,474	404,474	575	192
Mountain and Pacific.....	843,370	199,500	487	88	5,402,277	1,559,310	1,683	547
Total.....	11,818,770	1,733,765	3,658	439	39,397,330	9,356,839	9,393	2,454
Per cent of change.....		-85.3		-88.0		-76.3		-73.9

Decreases were shown in the estimated cost and in the number of family dwelling units provided in each of the different classes of housekeeping dwellings, comparing permits issued in June, 1932, with permits issued in June, 1931.

Details by Cities

TABLE 10 shows the estimated cost of new residential buildings, of new nonresidential buildings, of total building operations, together with the number of family dwelling units provided in new buildings, for each of the 354 identical cities from which reports were received for May, 1932, and June, 1932.

No reports were received from Hartford and New London, Conn.; Bangor, Me.; Nanticoke and Norristown, Pa.; Anderson, Ind.; Port Huron, Mich.; University City, Mo.; Lynchburg, Va.; Fort Smith, Ark.; Ashland, Ky.; Baton Rouge, La.; Muskogee, Okla.; Galveston, Laredo, and Houston, Tex.; and Butte, Mont.

Permits were issued for the following important building projects during the month of June, 1932: In New Haven for a dormitory at Yale University to cost \$600,000; in Worcester for a church to cost \$250,000; in the Borough of Queens for a school building to cost \$600,000; in Rochester for a school building to cost \$356,000; in Scranton for a school building to cost over \$1,000,000; in Cincinnati for a school building to cost \$325,000; in Austin for a State highway building and city fire station to cost over \$400,000; in Seattle for a public school building to cost \$235,000, and for a law school building at the University of Washington to cost over \$350,000.

Contracts were awarded by the Supervising Architect of the Treasury Department for a post office and Federal courthouse in Newark, N. J., to cost nearly \$3,000,000; for a post office in Jackson, Mich., to cost over \$300,000; for a post office in Sioux City, Iowa, to cost over \$550,000; for a Department of Justice Building in Washington, D. C., to cost \$7,667,000.

The Veterans' Administration awarded a contract for a hospital in Des Moines, Iowa, to cost nearly \$900,000.

TABLE 10.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, MAY AND JUNE, 1932

New England States

State and city	New residential buildings				New nonresidential buildings		Total construction, including alterations and repairs	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
Connecticut:								
Bridgeport.....	\$32, 140	\$39, 750	13	14	\$8, 230	\$9, 570	\$63, 390	\$62, 835
Bristol.....	11, 577	4, 000	1	2	10, 500	2, 950	26, 849	9, 280
Greenwich.....	35, 900	54, 500	7	4	31, 585	29, 400	78, 735	92, 650
Meriden.....	18, 300	10, 300	7	3	8, 185	58, 850	39, 790	78, 675
New Britain.....	8, 000	7, 000	1	1	76, 675	150	90, 090	12, 216
New Haven.....	29, 000	633, 600	8	7	15, 075	19, 400	69, 165	703, 005
Norwalk.....	11, 770	44, 600	4	11	1, 830	21, 960	33, 915	84, 340
Stamford.....	16, 000	9, 000	5	2	570	23, 850	34, 605	42, 125
Torrington.....	0	10, 000	0	4	1, 800	6, 730	13, 125	17, 425
Waterbury.....	8, 500	6, 700	3	4	4, 050	3, 775	25, 300	31, 800
West Hartford.....	52, 400	21, 800	7	3	3, 235	23, 655	62, 491	52, 944
Maine:								
Lewiston.....	8, 000	1, 600	2	1	10, 200	13, 000	18, 700	14, 600
Portland.....	48, 350	12, 600	11	4	41, 331	3, 050	113, 273	33, 746
Massachusetts:								
Arlington.....	84, 300	23, 500	12	4	2, 925	22, 990	90, 365	47, 775
Beverly.....	3, 500	23, 500	1	5	3, 355	2, 870	12, 200	35, 005
Boston ¹	167, 600	156, 200	40	30	72, 650	568, 755	562, 349	1, 052, 035
Brockton.....	3, 300	6, 500	1	2	54, 020	12, 125	67, 011	29, 189
Brookline.....	45, 500	90, 500	4	10	1, 335	6, 550	225, 542	193, 100
Cambridge.....	0	0	0	0	10, 110	8, 330	41, 900	30, 470
Chelsea.....	0	6, 000	0	1	1, 000	2, 180	7, 810	16, 200
Chicopee.....	4, 500	0	1	0	3, 250	4, 375	17, 475	10, 775
Everett.....	6, 000	0	2	0	300	730	11, 450	6, 430
Fall River.....	33, 250	2, 000	1	2	5, 519	1, 417	79, 544	10, 894
Fitchburg.....	8, 700	6, 200	2	2	2, 905	3, 315	16, 515	22, 545
Haverhill.....	1, 500	0	2	0	3, 720	4, 117	7, 325	8, 217
Holyoke.....	14, 000	10, 500	1	2	3, 750	2, 150	25, 550	15, 850
Lawrence.....	0	2, 500	0	1	10, 600	8, 300	14, 250	22, 365
Lowell.....	2, 700	10, 200	3	2	6, 005	1, 080	19, 695	18, 010
Lynn.....	12, 000	14, 450	1	5	4, 970	4, 642	33, 640	32, 758
Malden.....	11, 300	16, 200	3	4	2, 200	690	40, 807	22, 305
Medford.....	22, 000	31, 000	6	8	2, 575	70, 950	35, 385	118, 785
New Bedford.....	0	0	0	0	11, 025	7, 125	20, 525	14, 425
Newton.....	68, 200	36, 000	7	4	91, 700	89, 815	181, 315	134, 385
Pittsfield.....	16, 000	20, 500	5	4	23, 525	8, 950	53, 650	38, 875
Quincy.....	30, 186	23, 800	7	8	11, 795	157, 980	69, 266	192, 350
Revere.....	0	8, 800	0	3	450	4, 075	11, 900	19, 025
Salem.....	6, 200	14, 500	1	3	4, 850	186, 675	30, 869	211, 050
Somerville.....	0	0	0	0	2, 415	46, 745	15, 263	64, 725
Springfield.....	34, 850	29, 900	12	11	383, 200	12, 700	433, 350	163, 135
Taunton.....	6, 000	1, 275	2	3	23, 771	1, 068	34, 798	9, 209
Waltham.....	8, 800	14, 250	2	7	19, 935	1, 400	30, 903	18, 625
Watertown.....	0	15, 500	0	3	3, 600	39, 000	6, 640	58, 215
Worcester.....	65, 300	48, 600	15	13	5, 635	261, 665	108, 529	330, 835
New Hampshire:								
Concord.....	2, 000	9, 000	1	3	14, 300	1, 700	21, 500	14, 400
Manchester.....	21, 200	23, 060	10	12	2, 660	2, 590	41, 253	32, 694
Rhode Island:								
Central Falls.....	4, 200	0	1	0	450	500	5, 225	1, 600
Cranston.....	23, 800	24, 800	8	6	131, 990	9, 030	158, 635	39, 970
East Providence.....	21, 000	14, 150	5	4	18, 330	1, 260	55, 836	28, 715
Newport.....	12, 600	7, 000	3	1	3, 500	2, 400	22, 832	25, 645
Pawtucket.....	7, 800	22, 500	2	8	3, 980	1, 220	28, 060	26, 560
Providence.....	37, 300	42, 300	9	10	43, 650	25, 200	177, 575	144, 466
Woonsocket.....	18, 600	8, 000	7	1	1, 560	1, 255	123, 890	9, 770
Vermont: Burlington.....	15, 000	3, 000	3	1	4, 175	600	21, 750	4, 150
Total.....	1, 099, 123	1, 621, 635	249	243	1, 210, 951	1, 804, 859	3, 631, 819	4, 511, 203
Per cent of change.....		+47. 5		-2. 4		+49. 0		+21. 2

¹ Applications filed.

TABLE 10.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, MAY AND JUNE, 1932—Continued

Middle Atlantic States

State and city	New residential buildings				New nonresidential buildings		Total construction, including alterations and repairs	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
New Jersey:								
Atlantic City.....	0	0	0	0	\$1,400	\$7,535	\$56,968	\$41,081
Bayonne.....	\$5,000	\$5,000	2	2	0	6,700	13,789	38,200
Belleville.....	0	0	0	0	1,400	4,595	5,075	6,885
Bloomfield.....	54,000	17,500	12	5	1,500	5,000	58,500	24,500
Camden.....	14,000	5,100	1	3	2,490	12,400	28,457	17,500
Clifton.....	28,500	20,500	7	7	61,300	4,975	92,900	32,075
East Orange.....	0	22,000	0	2	3,550	144,100	10,815	184,142
Elizabeth.....	16,000	19,000	3	3	9,000	4,000	25,000	23,000
Garfield.....	10,000	3,000	5	1	2,675	5,100	15,475	15,000
Hackensack.....	17,000	0	2	0	306,230	88,131	336,570	98,288
Hoboken.....	0	15,000	0	6	0	53,800	23,355	82,711
Irvington.....	13,000	12,000	3	4	8,015	5,800	24,675	22,525
Jersey City.....	14,000	0	3	0	94,190	30,965	124,145	79,625
Kearny.....	0	5,500	0	2	1,250	1,360	5,400	7,585
Montclair.....	22,000	8,000	1	1	1,195	84,335	34,860	101,662
Newark.....	11,500	66,850	2	9	34,735	3,040,385	106,113	3,240,015
New Brunswick.....	0	0	0	0	1,160	1,550	10,195	7,400
Orange.....	0	0	0	0	6,625	1,452	18,740	12,832
Passaic.....	0	18,700	0	4	5,070	2,155	42,660	42,905
Paterson.....	7,000	2,600	2	2	353,363	33,598	428,116	81,739
Perth Amboy.....	0	0	0	0	4,175	450	10,550	11,650
Plainfield.....	26,000	0	4	0	8,675	3,400	38,423	8,324
Trenton.....	9,600	0	2	0	2,448	9,030	18,273	25,980
Union City.....	1,200	0	1	0	0	60,000	23,330	72,254
West New York.....	0	0	0	0	0	0	1,620	12,140
West Orange.....	24,000	30,100	2	5	1,715	3,150	26,314	38,814
New York:								
Albany.....	151,380	76,500	12	8	294,600	25,680	480,768	151,880
Amsterdam.....	12,850	32,899	3	9	7,230	2,055	20,080	35,654
Auburn.....	10,500	0	3	0	7,900	91,925	20,650	110,350
Binghamton.....	17,050	19,100	4	6	16,276	5,921	95,374	64,754
Buffalo.....	60,100	27,200	10	12	39,977	41,137	179,829	168,401
Elmira.....	11,835	3,600	3	1	2,012	7,215	23,877	16,105
Jamestown.....	14,100	3,700	4	2	384,685	3,525	403,790	18,805
Kingston.....	27,500	13,500	2	3	4,350	3,720	44,642	21,225
Lockport.....	0	0	0	0	0	0	0	0
Mount Vernon.....	25,500	36,800	3	5	4,737	189,675	54,822	237,375
Newburgh.....	13,000	0	2	0	31,500	3,600	51,150	7,775
New Rochelle.....	19,900	51,500	2	8	3,250	5,125	39,220	70,298
New York City:								
The Bronx ¹	271,950	256,950	66	61	74,780	57,850	614,695	559,955
Brooklyn ¹	309,500	267,850	58	60	530,360	461,170	1,383,631	1,280,169
Manhattan ¹	0	1,150,000	0	207	2,070,100	402,972	2,791,239	2,295,058
Queens ¹	440,940	274,570	115	79	967,422	911,134	1,665,764	1,505,674
Richmond ¹	39,150	81,200	18	29	624,485	85,155	694,446	248,745
Niagara Falls.....	21,000	6,500	2	1	48,402	173,665	104,895	232,193
Poughkeepsie.....	24,000	5,000	2	1	4,050	3,350	37,615	43,690
Rochester.....	31,340	5,000	7	2	32,877	392,100	127,964	431,975
Schenectady.....	21,600	17,200	5	7	5,670	35,531	72,308	74,984
Syracuse.....	46,900	38,300	10	9	65,270	7,560	142,940	128,312
Troy.....	48,550	27,850	6	6	62,475	8,925	116,625	55,135
Utica.....	42,000	25,200	8	7	3,670	2,000	54,100	61,060
Watertown.....	8,000	1,500	1	1	2,280	2,088	17,399	10,810
White Plains.....	7,000	82,500	1	10	15,250	12,000	29,715	102,409
Yonkers.....	123,500	98,300	22	15	20,301	60,350	223,976	196,525
Pennsylvania:								
Allentown.....	2,000	0	1	0	5,400	2,185	18,775	13,040
Altoona.....	13,600	2,800	2	3	3,273	3,454	30,739	11,322
Bethlehem.....	0	10,500	0	2	500	600	8,450	11,638
Butler.....	0	0	0	0	250	185	1,820	1,320
Chester.....	0	0	0	0	2,575	49,018	4,875	49,418
Easton.....	0	0	0	0	405	249,842	2,210	252,872
Erie.....	32,000	27,450	8	7	8,662	7,565	56,017	115,753
Harrisburg.....	20,000	21,400	3	5	6,175	2,325	39,265	33,865
Hazleton.....	19,198	38,421	4	9	9,961	42,741	64,072	87,859

¹ Applications filed.

TABLE 10.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, MAY AND JUNE, 1932—Continued

Middle Atlantic States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction, including alterations and repairs	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
Pennsylvania—Con.								
Johnstown.....	\$800	0	1	0	\$4,735	\$18,097	\$8,330	\$19,627
Lancaster.....	0	\$7,000	0	2	3,700	250	21,060	22,610
McKeesport.....	0	3,300	0	2	1,145	2,800	12,119	43,386
New Castle.....	0	0	0	0	12,930	910	13,240	1,480
Philadelphia.....	225,500	117,900	63	31	386,025	203,320	796,264	680,299
Pittsburgh.....	89,900	31,400	18	8	2,511,015	81,455	2,692,378	171,948
Reading.....	0	0	0	0	5,480	3,600	23,552	17,658
Scranton.....	9,500	10,300	3	3	50,923	1,157,425	83,854	1,225,595
Wilkes-Barre.....	2,600	24,875	1	9	3,760	68,995	27,770	103,664
Wilkesburg.....	0	0	0	0	235	700	885	5,100
Williamsport.....	8,000	3,200	3	2	36,225	967	86,006	21,431
York.....	13,500	3,800	2	1	1,325	3,430	21,985	16,972
Total.....	2,508,543	3,155,915	530	689	9,320,769	8,599,258	15,085,498	15,365,005
Per cent of change.....		+25.8		+30.0		-7.7		+1.9

East North Central States

Illinois:								
Alton.....	0	0	0	0	\$10,200	\$2,015	\$17,547	\$5,219
Aurora.....	0	0	0	0	2,560	6,339	9,458	12,169
Bellefonte.....	\$15,700	\$11,800	5	3	575	4,100	20,275	16,100
Berwyn.....	0	0	0	0	3,125	1,381	6,275	3,081
Bloomington.....	3,000	5,000	1	1	2,500	2,500	5,500	8,500
Chicago.....	95,250	96,400	23	16	993,448	119,146	1,572,785	431,699
Cicero.....	0	6,500	0	2	1,150	1,800	4,050	9,465
Danville.....	0	0	0	0	265,600	177,876	277,979	181,026
Decatur.....	9,000	0	2	0	57,050	710	71,445	2,525
East St. Louis.....	15,250	1,500	5	4	14,350	5,250	41,342	8,600
Elgin.....	19,000	14,700	4	3	10,550	1,437	37,065	21,846
Evanston.....	16,000	0	2	0	5,000	5,000	51,250	37,000
Granite City.....	0	0	0	0	0	200	0	200
Joliet.....	0	0	0	0	400	99,000	6,200	112,239
Maywood.....	7,000	0	1	0	311	1,475	8,681	2,425
Moline.....	12,800	0	2	0	2,415	1,900	17,226	16,799
Oak Park.....	0	58,000	0	5	0	2,050	48,425	63,640
Peoria.....	55,900	20,100	13	7	9,000	8,400	76,500	40,155
Quincy.....	0	0	0	0	1,985	425	3,660	1,160
Rockford.....	3,000	0	1	0	2,625	1,250	7,955	4,655
Rock Island.....	3,000	4,500	1	3	1,475	400	14,054	17,235
Springfield.....	14,150	8,200	7	2	8,440	80,525	33,422	109,558
Waukegan.....	4,000	6,000	1	1	8,000	13,300	14,450	21,000
Indiana:								
East Chicago.....	0	0	0	0	13,637	3,450	15,387	4,650
Elkhart.....	0	3,200	0	1	1,875	1,200	11,171	14,392
Evansville.....	7,200	4,100	2	2	98,760	26,043	112,418	52,650
Fort Wayne.....	23,800	9,190	4	4	6,760	127,487	43,907	142,115
Gary.....	1,000	1,000	1	1	1,235	200	3,635	1,875
Hammond.....	0	0	0	0	2,500	40,475	5,220	46,873
Indianapolis.....	28,450	122,150	6	10	675,107	46,025	757,206	271,754
Kokomo.....	0	0	0	0	400	2,635	11,035	3,245
Lafayette.....	8,200	0	4	0	0	0	8,200	3,690
Marion.....	1,000	0	1	0	5,165	450	8,625	3,375
Michigan City.....	0	6,400	0	3	2,500	400	2,600	88,050
Mishawaka.....	3,500	0	1	0	500	3,625	4,400	5,130
Muncie.....	0	5,630	0	3	1,037	3,097	4,593	11,643
Richmond.....	0	0	0	0	6,800	850	27,100	5,200
South Bend.....	2,500	11,150	1	3	8,390	6,070	27,635	25,310
Terre Haute.....	7,500	0	3	0	2,912	11,510	23,815	26,693
Michigan:								
Ann Arbor.....	37,550	24,500	6	4	2,725	1,195	46,655	44,691
Battle Creek.....	17,500	0	3	0	603,190	14,785	626,945	17,695
Bay City.....	10,725	9,500	6	3	1,880	2,175	21,613	20,373
Dearborn.....	18,500	14,300	6	3	20,405	34,371	44,880	53,471

TABLE 10.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, MAY AND JUNE, 1932—Continued

East North Central States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction, including alterations and repairs	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
Michigan—Contd.								
Detroit.....	\$99,850	\$189,650	23	36	\$307,356	\$215,366	\$560,432	\$543,903
Flint.....	4,792	5,820	1	2	5,632	16,074	20,634	30,699
Grand Rapids.....	13,100	13,300	5	4	16,345	75,315	52,510	101,420
Hamtramck.....	0	0	0	0	4,000	525	11,760	3,435
Highland Park.....	8,000	0	1	0	455	100	13,730	1,935
Jackson.....	4,300	0	1	0	2,408	308,951	10,723	312,662
Kalamazoo.....	22,000	0	3	0	687	2,320	29,575	11,350
Lansing.....	0	5,000	0	1	3,575	4,340	10,695	11,562
Muskegon.....	1,000	0	1	0	2,835	4,985	10,255	10,975
Pontiac.....	0	0	0	0	0	1,888	0	2,398
Royal Oak.....	1,500	0	2	0	150	475	1,875	1,075
Saginaw.....	8,000	1,000	4	1	72,597	4,622	90,045	11,392
Wyandotte.....	1,800	4,950	1	2	550	216,700	9,100	232,455
Ohio:								
Akron.....	37,500	34,500	5	8	9,615	22,900	63,400	72,560
Ashtabula.....	0	6,200	0	3	1,220	150	1,640	8,750
Canton.....	2,150	0	2	0	13,830	655	17,623	7,835
Cincinnati.....	280,850	178,100	50	29	66,935	394,035	446,205	649,630
Cleveland.....	58,800	64,500	12	14	251,650	132,037	393,300	302,862
Cleveland Heights.....	36,000	11,800	6	2	425	940	42,165	14,350
Columbus.....	26,500	25,000	4	5	92,950	117,050	227,911	257,200
Dayton.....	20,000	22,875	6	6	20,104	24,619	58,171	66,354
East Cleveland.....	0	0	0	0	2,150	4,000	2,480	5,010
Elyria.....	0	1,500	0	1	865	4,850	3,665	25,525
Hamilton.....	3,000	0	1	0	7,115	500	11,050	4,435
Lakewood.....	21,300	10,000	3	1	6,125	1,820	31,085	14,880
Lima.....	0	0	0	0	1,550	850	3,325	3,350
Lorain.....	0	0	0	0	785	1,725	1,050	4,435
Mansfield.....	16,000	8,000	2	1	3,775	5,979	20,914	16,577
Marion.....	0	0	0	0	685	13,150	685	13,300
Massillon.....	0	600	0	1	590	335	1,470	1,560
Middletown.....	0	0	0	0	21,750	1,600	24,080	4,785
Newark.....	8,050	4,500	2	3	3,200	1,150	11,990	6,750
Norwood.....	3,500	7,000	1	1	600	650	8,625	8,406
Portsmouth.....	0	4,500	0	1	1,460	6,600	1,735	11,638
Springfield.....	3,800	6,550	2	4	2,976	5,305	9,706	13,805
Steubenville.....	3,000	0	1	0	650	1,000	4,550	2,550
Toledo.....	31,050	2,075	6	2	10,352	6,820	50,940	39,154
Warren.....	0	5,700	0	1	720	1,760	4,160	9,905
Youngstown.....	0	15,725	0	3	9,757	3,482	14,147	24,334
Wisconsin:								
Appleton.....	37,600	23,830	9	5	11,020	37,640	63,695	63,035
Eau Claire.....	13,800	14,600	7	8	6,100	10,400	28,930	29,237
Fond du Lac.....	3,500	10,900	1	2	1,115	960	5,825	13,985
Green Bay.....	21,500	18,700	9	7	7,035	5,695	37,785	35,480
Kenosha.....	0	10,000	0	3	2,330	157,065	8,330	170,200
Madison.....	99,600	43,600	16	8	4,410	8,050	122,755	64,445
Milwaukee.....	116,500	91,300	26	18	27,101	60,464	324,858	224,914
Oshkosh.....	6,800	0	4	0	8,370	3,190	29,000	10,054
Racine.....	13,700	0	2	0	2,170	1,125	19,110	7,225
Sheboygan.....	9,000	23,700	2	5	5,395	2,905	26,013	40,853
Superior.....	7,775	11,000	5	3	765	960	14,615	22,677
West Allis.....	6,000	0	1	0	3,705	2,655	12,460	4,295
Total.....	1,492,092	1,320,295	339	275	3,884,477	2,759,434	7,123,366	5,520,772
Per cent of change.....		-11.5		-18.9		-29.0		-22.5

West North Central States

Iowa:								
Burlington.....	\$5,000	\$4,000	1	2	\$2,600	\$44,850	\$9,100	\$51,350
Cedar Rapids.....	29,325	13,550	8	6	13,555	5,695	70,639	30,074
Council Bluffs.....	17,550	0	4	0	3,997	1,400	26,617	2,500
Davenport.....	23,600	10,800	7	3	4,815	2,750	38,969	27,599

TABLE 10.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, MAY AND JUNE, 1932—Continued

West North Central States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction, including alterations and repairs	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
Iowa—Continued.								
Des Moines.....	\$37,700	\$74,400	11	17	\$20,435	\$992,715	\$80,125	\$1,083,320
Dubuque.....	12,750	0	4	0	2,200	7,807	27,582	15,313
Ottumwa.....	17,350	11,750	6	3	351,350	6,000	374,100	27,000
Sioux City.....	38,600	27,300	13	8	11,420	558,920	77,270	718,745
Waterloo.....	15,800	3,600	4	2	12,040	1,600	28,765	17,775
Kansas:								
Hutchinson.....	3,650	700	3	1	2,660	115	9,667	28,297
Kansas City.....	2,550	3,500	4	1	21,045	1,855	25,920	10,545
Topeka.....	22,975	5,100	11	3	5,770	6,660	31,900	22,513
Wichita.....	42,350	5,400	14	4	737,832	12,095	790,737	36,708
Minnesota:								
Duluth.....	20,950	15,800	12	11	7,365	12,735	55,393	114,861
Minneapolis.....	236,900	139,200	59	37	955,318	30,315	1,280,888	222,325
St. Paul.....	100,680	130,320	21	23	49,696	73,155	250,179	253,186
Missouri:								
Joplin.....	3,000	0	0	0	26,550	1,575	32,450	2,825
Kansas City.....	58,500	46,000	14	11	49,500	16,200	127,900	240,600
Springfield.....	32,800	9,650	9	4	41,675	32,375	83,900	44,025
St. Joseph.....	3,000	13,500	1	4	76,460	3,425	88,435	21,275
St. Louis.....	201,900	182,300	55	43	51,370	157,020	349,365	462,065
Nebraska:								
Lincoln.....	16,000	28,800	7	9	4,790	21,360	26,715	52,410
Omaha.....	85,000	49,575	28	15	32,470	219,015	155,633	278,229
North Dakota: Fargo.....	15,800	25,300	4	6	5,755	2,865	32,592	31,865
South Dakota: Sioux Falls.....	38,125	19,700	15	10	4,000	10,272	44,625	30,525
Total.....	1,081,855	820,245	315	223	2,494,668	2,222,774	4,119,466	3,825,930
Per cent of change.....		-24.2		-29.2		-10.9		-7.1

South Atlantic States

Delaware: Wilmington.....	\$70,500	\$16,000	19	4	\$7,620	\$36,753	\$90,158	\$66,946
District of Columbia: Washington.....	552,400	618,600	88	138	22,343,270	9,904,982	23,050,800	10,669,554
Florida:								
Jacksonville.....	37,950	39,675	14	7	64,529	13,890	143,864	86,987
Miami.....	4,200	17,270	4	10	19,520	27,133	92,664	80,939
Orlando.....	0	7,000	0	3	500	0	6,990	14,803
Pensacola.....	17,125	19,500	11	10	26,105	3,066	58,329	77,644
St. Petersburg.....	1,000	800	3	1	1,000	2,200	21,600	20,400
Tampa.....	3,050	2,600	5	3	23,003	8,330	41,813	28,497
West Palm Beach.....	6,363	9,112	1	4	12,613	1,535	26,917	16,824
Georgia:								
Atlanta.....	18,900	47,000	13	15	45,052	115,380	116,040	444,200
Augusta.....	14,050	12,620	7	7	2,300	0	24,229	21,709
Columbus.....	7,080	20,000	2	3	425	23,650	9,196	48,875
Macon.....	0	3,550	0	2	0	5,600	19,459	21,518
Savannah.....	0	2,200	0	2	10,545	690	13,020	5,359
Maryland:								
Baltimore.....	189,000	125,000	44	25	973,981	127,600	1,769,881	806,990
Cumberland.....	0	4,500	0	2	2,760	168,897	3,555	173,997
Hagerstown.....	0	9,000	0	2	660	2,400	2,410	12,450
North Carolina:								
Asheville.....	1,825	0	2	0	790	463	4,970	1,985
Charlotte.....	43,300	23,990	9	5	64,955	1,425	117,195	31,716
Durham.....	12,000	7,500	3	5	87,225	5,750	109,625	23,250
Greensboro.....	5,250	700	3	1	1,705	1,385	16,759	8,857
High Point.....	14,000	0	3	0	600	2,100	14,740	6,600
Raleigh.....	5,710	500	6	1	13,900	125	22,610	1,175
Wilmington.....	1,500	0	1	0	1,900	0	8,050	3,700
Winston-Salem.....	44,000	2,000	5	1	10,315	31,175	66,730	38,825

TABLE 10.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, MAY AND JUNE, 1932—Continued

South Atlantic States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction, including alterations and repairs	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
South Carolina:								
Charleston.....	\$1,175	0	3	0	\$3,575	\$6,435	\$13,181	\$24,649
Columbia.....	19,000	\$5,000	16	2	21,725	76,399	53,405	85,679
Greenville.....	9,000	3,800	2	2	3,530	540	34,125	8,310
Spartanburg.....	450	0	1	0	50	0	2,470	3,115
Virginia:								
Newport News.....	2,900	15,100	2	7	2,580	9,350	11,986	28,032
Norfolk.....	58,400	82,350	23	22	4,800	15,785	102,465	127,590
Petersburg.....	0	0	0	0	1,895	2,455	2,725	4,205
Portsmouth.....	13,400	8,400	4	4	323	1,250	24,258	17,385
Richmond.....	48,550	60,500	13	15	96,212	26,160	174,277	175,427
Roanoke.....	5,900	4,700	1	0	370	265	9,745	13,660
West Virginia:								
Charleston.....	43,500	12,000	14	2	3,475	1,200	51,746	23,189
Clarksburg.....	1,500	4,100	1	4	13,525	1,670	16,035	7,276
Huntington.....	0	500	0	1	1,305	1,000	13,725	5,250
Parkersburg.....	2,600	0	1	0	1,145	1,150	6,260	2,870
Wheeling.....	6,600	1,110	2	2	36,695	18,350	55,463	28,960
Total.....	1,262,178	1,186,677	326	312	23,906,478	10,646,538	26,432,470	13,269,397
Per cent of change.....		-6.0		-4.3		-55.5		-49.8

South Central States

Alabama:								
Birmingham.....	\$12,500	\$9,400	3	5	\$24,104	\$4,450	\$72,717	\$40,183
Mobile.....	6,000	9,100	6	2	51,000	5,900	71,803	41,879
Montgomery.....	13,800	10,200	10	11	1,975	4,566	25,340	28,580
Arkansas: Little Rock.....	350	4,915	1	5	7,400	3,365	18,499	31,290
Kentucky:								
Covington.....	0	0	0	0	2,880	600	12,552	5,185
Lexington.....	46,300	2,500	27	1	19,290	225	83,737	13,203
Louisville.....	25,600	19,000	8	5	31,459	18,600	92,044	73,500
Newport.....	0	0	0	0	6,200	350	7,500	2,300
Paducah.....	0	750	0	2	15,000	0	16,400	1,950
Louisiana:								
Monroe.....	1,600	0	3	0	0	0	2,700	15,215
New Orleans.....	29,100	71,638	25	25	9,545	8,423	81,354	145,998
Shreveport.....	14,475	16,575	10	10	4,133	1,879	38,968	47,983
Mississippi: Jackson.....	1,000	0	1	0	2,300	39,600	13,400	52,410
Oklahoma:								
Enid.....	0	0	0	0	400	9,125	1,850	9,975
Oklahoma City.....	34,500	26,000	11	8	1,039,075	101,161	1,099,705	205,711
Okmulgee.....	0	0	0	0	700	0	1,150	0
Tulsa.....	24,100	0	5	0	6,042	79,059	37,867	97,666
Tennessee:								
Chattanooga.....	5,500	2,500	4	1	869,100	35,100	889,871	60,127
Johnson City.....	10,800	0	5	0	4,700	450	15,600	450
Knoxville.....	8,320	8,133	2	5	948,750	64,082	963,400	76,839
Memphis.....	4,680	24,700	5	9	25,610	28,990	87,620	119,210
Nashville.....	36,800	13,300	15	6	258,025	25,565	306,969	57,314
Texas:								
Amarillo.....	9,150	6,530	5	3	45,485	5,040	63,000	16,124
Austin.....	57,295	30,385	29	20	128,824	461,893	240,697	506,569
Beaumont.....	5,700	0	3	0	4,820	10,763	37,984	12,196
Brownsville.....	0	0	0	0	200	2,850	1,515	3,528
Dallas.....	82,300	20,600	52	18	33,258	40,926	177,163	100,834
El Paso.....	2,250	5,800	1	4	2,810	2,756	11,863	22,578
Fort Worth.....	43,500	82,600	17	30	17,900	62,600	84,625	169,300
Port Arthur.....	0	0	0	0	980	1,305	6,305	4,186
San Angelo.....	0	15,000	0	1	200	123,650	2,755	138,700
San Antonio.....	41,860	6,048	24	14	10,213	23,449	80,479	47,627
Waco.....	6,100	11,300	6	6	536	2,935	24,521	19,435
Wichita Falls.....	7,500	7,500	1	1	150	7,100	10,482	25,716
Total.....	531,080	404,474	279	192	3,573,064	1,176,157	4,682,435	2,193,761
Per cent of change.....		-23.8		-31.2		-67.1		-53.1

TABLE 10.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, MAY AND JUNE, 1932—Continued

Mountain and Pacific States

State and city	New residential buildings				New nonresidential buildings		Total construction, including alterations and repairs	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932	May, 1932	June, 1932
Arizona:								
Phoenix.....	\$7, 180	\$14, 000	5	2	\$34, 630	\$6, 800	\$60, 505	\$24, 507
Tucson.....	12, 650	14, 950	6	6	2, 105	3, 475	21, 029	29, 445
California:								
Alameda.....	3, 000	7, 500	1	2	12, 450	53, 845	20, 777	144, 474
Alhambra.....	21, 000	17, 300	8	11	5, 350	400	27, 275	28, 500
Bakersfield.....	6, 450	2, 500	2	1	635	675	15, 215	12, 160
Berkeley.....	52, 350	47, 800	14	9	9, 525	25, 700	78, 878	104, 775
Fresno.....	24, 150	11, 450	6	3	5, 948	7, 750	58, 207	36, 700
Glendale.....	68, 500	45, 750	16	12	11, 645	23, 335	91, 600	77, 160
Huntington Park.....	19, 975	6, 800	13	3	2, 005	17, 530	25, 570	25, 450
Long Beach.....	26, 700	40, 200	11	15	138, 020	230, 745	187, 470	305, 530
Los Angeles.....	557, 157	509, 790	195	187	313, 506	189, 220	1, 174, 039	1, 045, 918
Oakland.....	91, 150	67, 900	20	14	193, 009	94, 499	323, 018	208, 623
Pasadena.....	35, 000	30, 100	9	6	42, 784	18, 104	105, 063	76, 522
Riverside.....	13, 350	13, 600	4	2	1, 430	1, 725	19, 119	23, 740
Sacramento.....	42, 150	5, 000	9	1	361, 071	15, 550	438, 493	72, 685
San Bernardino.....	4, 500	1, 000	1	1	7, 400	3, 005	18, 441	8, 161
San Diego.....	76, 750	62, 850	28	26	19, 030	11, 670	135, 201	149, 134
San Francisco.....	287, 023	305, 985	66	106	169, 563	270, 924	865, 009	802, 454
San Jose.....	12, 300	13, 750	5	4	755	211, 320	24, 255	246, 520
Santa Ana.....	26, 150	0	7	0	2, 000	1, 900	37, 056	5, 025
Santa Barbara.....	25, 300	16, 300	8	4	3, 505	4, 065	42, 115	27, 965
Santa Monica.....	21, 350	17, 000	7	7	1, 750	1, 545	25, 370	22, 421
Stockton.....	36, 250	39, 100	10	4	357, 406	2, 985	401, 216	67, 021
Vallejo.....	3, 950	18, 200	2	7	2, 190	1, 275	11, 172	21, 950
Colorado:								
Colorado Springs.....	3, 000	1, 475	1	2	2, 742	4, 390	20, 307	10, 925
Denver.....	347, 250	87, 500	48	24	84, 305	27, 200	502, 235	178, 400
Pueblo.....	5, 800	0	4	0	3, 840	11, 610	14, 170	15, 110
Montana: Great Falls.....	3, 700	8, 475	2	5	4, 250	17, 050	11, 135	27, 975
New Mexico: Albuquerque.....	5, 000	15, 700	3	8	8, 075	13, 735	38, 007	43, 574
Oregon:								
Portland.....	96, 060	83, 950	20	21	297, 565	20, 790	447, 874	160, 195
Salem.....	5, 800	6, 300	4	3	4, 615	377	29, 296	10, 075
Utah:								
Ogden.....	7, 000	12, 000	3	7	8, 110	2, 850	35, 955	26, 250
Salt Lake City.....	33, 600	16, 200	10	6	20, 030	16, 839	63, 365	45, 533
Washington:								
Bellingham.....	6, 300	0	5	0	1, 400	505	14, 372	4, 180
Everett.....	10, 500	0	2	0	200	2, 550	15, 467	7, 781
Seattle.....	55, 585	52, 850	34	29	419, 025	447, 033	542, 506	598, 758
Spokane.....	34, 000	6, 135	11	5	4, 115	8, 385	56, 650	24, 080
Tacoma.....	24, 500	13, 000	6	11	4, 365	5, 705	41, 625	46, 635
Total.....	2, 112, 430	1, 612, 410	606	554	2, 560, 349	1, 777, 061	6, 039, 057	4, 766, 311
Per cent of change.....		-23. 7		-8. 6		-30. 6		-21. 1

Hawaii

Honolulu.....	\$128, 761	\$119, 884	77	65	\$13, 184	\$174, 884	\$168, 316	\$316, 023
Per cent of change.....		-6. 9		-15. 6		+1, 226. 5		+87. 8

Building Permits Issued in Cities of the United States Having a Population of 100,000 or Over, First Half of 1932

General Summary

THE Bureau of Labor Statistics has been publishing data semi-annually covering building permits issued in cities of the United States having a population of 100,000 or over since 1922. Reports were received for both the first half of 1931 and the first half of 1932 from the 94 cities which fell in this population group according to the estimate of population as issued by the Census Bureau as of July 1, 1931. The costs as shown in the table below are those stated by the prospective builder when applying for his permit to build. They include the cost of the building only; no land costs are included. Only buildings within the corporate limits of the cities enumerated are shown. During the first half of 1932, permits were issued for building operations in these 94 cities to cost \$245,467,403. This is 60.6 per cent less than indicated expenditures during the first half of 1931. The estimated cost of new residential buildings decreased 76.0 per cent comparing permits issued during the first half of 1932 with those issued during the first half of 1931. During the first half of 1932, 14,229 family dwelling units were provided in new residential buildings. This is a decrease of 73.5 as compared with the first half of 1931. Indicated expenditures for new nonresidential buildings decreased 52.6 per cent comparing the two periods under discussion.

Although most of the 94 cities showed a decrease in the estimated cost of total building operations, there were a few exceptions. Atlanta, Ga.; Chattanooga, Tenn.; Duluth, Minn.; Fall River, Mass.; Grand Rapids, Mich.; Knoxville, Tenn.; Newark, N. J.; Norfolk, Va.; Scranton, Pa.; and Washington, D. C., were the only cities showing an increase in total building operations comparing the first half of 1932 with the first half of 1931. The increase in all these cities was slight, except in the case of Washington where contracts were awarded for a number of large buildings by the Federal Government. The increase in Washington was over \$19,000,000.

The table following shows the estimated costs of the new residential buildings, new nonresidential buildings, and total building operations in 94 cities of the United States having a population of 100,000 or over.

ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS IN 94 CITIES OF THE UNITED STATES HAVING A POPULATION OF 100,000 OR OVER, FOR THE FIRST HALF OF 1931 COMPARED WITH THE FIRST HALF OF 1932

City	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings		First half of 1931	First half of 1932	First half of 1931	First half of 1932
	First half of 1931	First half of 1932	First half of 1931	First half of 1932				
Akron.....	\$293, 075	\$115, 700	62	27	\$335, 369	\$313, 797	\$1, 154, 663	\$537, 165
Albany.....	867, 290	627, 080	109	53	568, 526	499, 830	1, 850, 717	1, 354, 543
Atlanta.....	603, 885	274, 050	262	112	446, 430	2, 251, 946	1, 726, 571	3, 078, 150
Baltimore.....	6, 556, 000	1, 395, 000	1, 612	297	4, 761, 200	3, 123, 981	15, 049, 700	7, 521, 309
Birmingham.....	123, 555	52, 160	54	30	909, 380	132, 909	1, 423, 269	372, 375
Boston ¹	4, 009, 460	1, 069, 800	963	239	11, 112, 760	2, 048, 724	17, 583, 794	6, 328, 479
Bridgeport.....	1, 016, 700	287, 940	258	90	405, 726	71, 714	1, 679, 871	463, 552
Buffalo.....	2, 186, 000	385, 540	680	111	3, 094, 029	584, 158	5, 856, 980	1, 386, 725
Cambridge.....	709, 650	104, 000	125	48	368, 599	1, 021, 265	1, 658, 822	1, 465, 171
Camden.....	74, 800	19, 100	30	4	584, 951	201, 162	760, 241	305, 348
Canton.....	78, 750	6, 950	16	4	245, 915	284, 880	467, 066	309, 358
Chattanooga.....	205, 265	40, 650	69	21	129, 072	983, 130	583, 552	1, 183, 538
Chicago.....	4, 367, 850	666, 900	697	129	30, 122, 165	3, 155, 044	37, 651, 195	5, 332, 282
Cincinnati.....	3, 894, 890	1, 465, 655	730	280	8, 484, 660	1, 746, 412	13, 830, 685	3, 704, 020
Cleveland.....	1, 397, 700	622, 900	257	124	2, 838, 900	4, 906, 812	7, 774, 300	6, 545, 787
Columbus.....	1, 212, 500	164, 600	228	29	853, 250	364, 300	2, 352, 400	965, 061
Dallas.....	1, 214, 710	405, 169	585	222	651, 977	495, 941	2, 524, 491	1, 366, 325
Dayton.....	481, 612	128, 675	117	31	1, 280, 977	141, 393	1, 997, 144	378, 397
Denver.....	2, 497, 500	1, 054, 650	686	207	1, 002, 090	320, 170	4, 124, 090	1, 812, 345
Des Moines.....	640, 270	275, 200	169	71	1, 236, 377	1, 047, 617	2, 036, 176	1, 483, 092
Detroit.....	7, 708, 430	1, 402, 074	1, 528	187	6, 753, 917	4, 640, 388	16, 587, 346	6, 948, 907
Duluth.....	150, 286	63, 250	38	32	60, 900	238, 606	443, 374	515, 921
Elizabeth.....	433, 000	100, 000	119	16	157, 100	43, 800	590, 100	143, 800
El Paso.....	423, 633	28, 300	132	14	117, 820	62, 121	684, 379	149, 276
Erie.....	445, 750	173, 400	90	45	497, 359	82, 072	1, 236, 813	421, 137
Evansville.....	246, 175	31, 700	63	11	378, 780	256, 628	710, 610	372, 921
Fall River.....	8, 400	44, 850	3	6	195, 564	206, 998	267, 206	383, 336
Flint.....	383, 890	19, 212	77	6	638, 034	53, 558	1, 219, 236	148, 970
Fort Wayne.....	433, 530	62, 190	92	14	978, 076	1, 225, 857	1, 601, 395	1, 381, 451
Fort Worth.....	964, 028	410, 945	302	165	2, 045, 768	201, 533	3, 270, 974	814, 346
Gary.....	109, 300	16, 000	28	6	607, 305	3, 820	817, 715	28, 745
Grand Rapids.....	210, 950	80, 706	59	21	223, 975	1, 150, 235	665, 315	1, 319, 905
Hartford.....	212, 300	150, 220	45	39	729, 698	476, 984	1, 857, 829	1, 008, 826
Houston.....	4, 701, 226	818, 985	1, 135	318	2, 100, 605	723, 807	6, 992, 074	1, 640, 902
Indianapolis.....	1, 183, 725	425, 050	216	79	2, 413, 579	947, 555	4, 061, 803	1, 711, 615
Jacksonville.....	236, 750	180, 450	85	70	132, 575	138, 689	725, 200	520, 516
Jersey City.....	269, 900	166, 200	69	47	511, 061	295, 112	1, 231, 171	656, 392
Kansas City, Kans.....	139, 600	40, 600	70	31	267, 848	47, 085	447, 948	113, 535
Kansas City, Mo.....	965, 500	416, 500	231	111	4, 401, 150	477, 000	6, 296, 400	1, 210, 500
Knoxville.....	152, 960	93, 117	53	35	154, 979	1, 102, 312	380, 551	1, 228, 181
Long Beach.....	1, 589, 275	436, 785	600	169	637, 125	1, 562, 817	2, 494, 615	2, 229, 047
Los Angeles.....	10, 609, 623	4, 105, 249	3, 626	1, 473	8, 232, 815	4, 762, 140	23, 096, 177	11, 307, 409
Louisville.....	701, 500	204, 350	104	46	1, 647, 545	398, 075	2, 724, 155	899, 415
Lowell.....	100, 150	37, 800	24	12	116, 745	9, 380	324, 295	91, 775
Lynn.....	267, 000	53, 750	56	13	388, 035	30, 857	874, 391	235, 908
Memphis.....	394, 680	117, 910	160	55	708, 035	624, 390	1, 737, 116	1, 175, 330
Miami.....	290, 205	98, 510	88	56	343, 050	341, 174	1, 098, 229	657, 412
Milwaukee.....	2, 535, 050	499, 950	535	108	2, 701, 435	441, 625	7, 110, 216	1, 629, 461
Minneapolis.....	2, 500, 935	971, 725	629	251	3, 666, 795	1, 310, 886	6, 987, 355	2, 743, 541
Nashville.....	390, 350	197, 800	134	89	919, 575	427, 165	1, 565, 579	753, 437
Newark.....	1, 084, 700	407, 750	234	72	838, 147	3, 527, 804	3, 194, 540	4, 649, 215
New Bedford.....	68, 000	4, 000	11	1	175, 100	54, 800	319, 000	104, 375
New Haven.....	935, 700	199, 700	81	38	1, 351, 665	716, 975	2, 593, 586	1, 114, 975
New Orleans.....	536, 904	325, 542	182	132	2, 841, 964	447, 001	3, 840, 848	1, 119, 070
New York:								
The Bronx ¹	23, 560, 402	2, 707, 290	5, 667	716	15, 876, 750	574, 180	41, 589, 702	4, 843, 839
Brooklyn ¹	27, 988, 675	4, 107, 650	7, 121	1, 072	5, 104, 157	5, 775, 105	40, 090, 137	13, 018, 218
Manhattan ¹	11, 133, 000	2, 400, 000	1, 582	471	71, 901, 512	14, 873, 322	98, 445, 710	21, 566, 443
Queens ¹	36, 095, 700	5, 501, 785	8, 405	1, 431	9, 571, 119	3, 512, 602	49, 190, 800	10, 815, 054
Richmond ¹	2, 164, 060	538, 005	627	154	2, 283, 175	1, 184, 478	4, 936, 681	2, 415, 117
Norfolk.....	491, 868	449, 175	129	128	104, 636	345, 985	822, 129	973, 316
Oakland.....	1, 789, 584	551, 226	507	146	2, 913, 458	563, 727	5, 145, 470	1, 440, 429
Oklahoma City.....	2, 722, 850	309, 200	643	80	9, 357, 761	4, 738, 796	12, 370, 226	5, 254, 171
Omaha.....	718, 050	393, 025	175	105	1, 179, 936	512, 978	2, 329, 614	1, 026, 651
Paterson.....	165, 975	77, 125	38	23	377, 775	461, 495	879, 934	780, 624
Peoria.....	664, 950	235, 100	156	59	55, 092	45, 618	993, 477	341, 349
Philadelphia.....	2, 747, 425	1, 378, 305	562	334	10, 284, 440	5, 236, 335	15, 065, 440	7, 884, 358

¹ Applications filed.

ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS IN 94 CITIES OF THE UNITED STATES HAVING A POPULATION OF 100,000 OR OVER, FOR THE FIRST HALF OF 1931 COMPARED WITH THE FIRST HALF OF 1932—Continued

City	New residential building				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings		First half of 1931	First half of 1932	First half of 1931	First half of 1932
	First half of 1931	First half of 1932	First half of 1931	First half of 1932				
Pittsburgh.....	\$1,834,785	\$425,050	378	99	\$4,224,352	\$2,939,799	\$7,560,490	\$4,042,250
Portland, Oreg.....	1,720,600	521,190	363	121	1,060,385	995,365	3,500,410	2,047,854
Providence.....	892,500	345,050	141	69	677,860	303,236	2,434,183	1,226,707
Reading.....	181,800	159,000	19	30	1,811,732	67,465	2,254,809	343,571
Richmond, Va.....	810,877	285,700	131	82	344,553	196,137	1,482,214	716,489
Rochester.....	761,900	299,740	81	52	1,944,048	650,016	3,207,022	1,327,591
St. Louis.....	3,143,187	1,321,050	837	341	7,586,067	479,796	11,693,679	2,600,054
St. Paul.....	1,045,800	563,388	201	105	6,687,947	558,834	8,366,848	1,631,565
Salt Lake City.....	862,990	91,300	267	28	1,575,798	68,111	2,609,252	266,409
San Antonio.....	574,960	223,990	375	151	645,965	703,489	1,424,164	1,076,143
San Diego.....	1,335,652	465,777	374	173	1,777,426	526,598	3,581,971	1,312,288
San Francisco.....	5,655,846	2,539,033	1,446	697	6,003,024	1,872,562	12,873,619	5,668,911
Scranton.....	81,625	94,675	27	25	288,303	1,536,096	658,401	1,837,277
Seattle.....	2,391,210	430,985	768	203	3,125,776	1,588,252	6,684,966	2,563,933
Somerville.....	126,500	9,700	32	3	401,675	402,222	647,300	485,170
South Bend.....	150,000	46,150	36	11	180,140	197,825	405,851	311,125
Spokane.....	487,450	190,060	127	64	605,945	52,565	1,382,004	357,990
Springfield, Mass.....	353,970	144,700	73	44	897,272	439,700	1,518,237	791,376
Syracuse.....	716,100	255,700	137	52	2,878,656	658,922	4,793,074	1,142,496
Tacoma.....	280,000	115,000	113	54	973,680	75,425	1,444,700	289,330
Tampa.....	113,425	32,950	39	28	146,930	71,788	408,917	224,782
Toledo.....	535,800	110,375	118	26	830,832	43,006	1,646,733	249,576
Trenton.....	197,400	61,200	21	11	448,852	146,428	873,110	274,500
Tulsa.....	1,159,525	97,550	276	28	1,291,015	175,889	2,712,311	351,163
Utica.....	182,500	121,700	37	25	156,018	21,295	527,756	207,210
Washington.....	13,891,655	4,232,200	2,205	769	7,090,023	38,569,244	24,421,984	44,037,364
Waterbury.....	166,700	39,200	42	14	80,000	11,825	393,775	107,685
Wichita.....	637,380	120,300	207	38	439,199	792,463	1,213,831	986,234
Wilmington.....	661,350	185,300	131	44	672,281	339,180	1,844,681	674,539
Worcester.....	740,900	338,400	121	76	111,045	314,735	1,172,842	805,429
Yonkers.....	3,227,740	903,300	396	143	2,172,385	200,491	5,700,680	1,354,386
Youngstown.....	233,850	31,925	48	7	397,009	402,076	1,032,418	473,863
Total.....	229,213,383	54,995,807	53,787	14,229	303,902,481	143,949,890	622,464,820	245,467,403
Per cent of change.....		-76.0		-73.5		-52.6		-60.6

Tax Exemption and Low-Cost Housing in New York City

IN June, 1927, New York City adopted an ordinance remitting local taxes for a period of 20 years on model tenements erected by limited-dividend corporations, provided they met certain specifications. A State law passed a year earlier had exempted such buildings from State taxes, if they were finished before 1937, to the same extent that local taxes might be remitted. The latest report of the State housing board¹ gives data as to the amount and kind of housing now available in New York City and the amount and kind provided under the legislation of 1926 and 1927. It also contains a discussion of the objections most commonly brought against encouraging the provision of housing by tax exemption and shows how far these are applicable to the limited-dividend housing projects of recent years.

¹ New York State Board of Housing. Report. Albany, 1932. (Legislative document (1932), No. 84.)

Amount and Kind of Multifamily Housing in New York

It is not commonly realized how large a proportion of New York's housing accommodation is still to be found in the old-law tenements. In 1900, at which date their construction was still legal, there were 82,652 in the city; in 1901 a new law was passed, enforcing a higher standard, but in 1930 the number of old-law tenements had fallen only to 67,658, or to 81.9 per cent of the 1900 figure. The common type of old-law tenement is thus described:

The building was on a lot 25 by 100 feet. It extended back 90 feet, leaving 10 feet in the rear for some light and air to back rooms. Each floor above the ground floor consisted of four apartments, two front apartments of four rooms each and two rear apartments of three rooms each. A so-called "air shaft," with a width of 28 inches and a length of 50 to 60 feet and inclosed on all sides, was designed to provide light and air to the five rooms on each side of the house. Only 4 of the 14 rooms on each floor received direct light and air from the street or yard. A 4-room apartment consisted of one room known as the parlor, which was generally about 11 feet 3 inches in length and 10 feet 6 inches in width. The kitchen was somewhat smaller and received its light and air from the "air shaft" or such a supply as came to it from the front room. Behind these two rooms were the bedrooms, the dimensions of which were 8 feet 6 inches by 7 feet. These rooms received no light and air whatsoever except that which came from the "air shaft." In the public hallway, opposite the stairs, were provided two water-closets. Each water-closet was used in common by two families and was lighted and ventilated by the "air shaft."

Of such apartments the old-law tenements in New York City contained 641,344 in 1909 and 528,951 in 1930. "In other words, 82.5 per cent of the suites which existed 22 years ago are here to-day."

The tenement-house law of 1901 brought about some improvement of conditions in buildings put up after that date. Every room must receive some light and air, hallways must be at least 3 feet wide, and the height of the house must not exceed one and a half times the width of the street. The size of the rooms and the coverage of the lot were regulated, provision must be made against dampness of cellar walls and floors, and a separate water-closet for each apartment was required. Between the coming into operation of the law (1901) and 1930 the net increase in the number of suites in new-law apartments was 898,136.

In Manhattan the construction of one and two family dwellings has ceased entirely, but in the other boroughs there has been a net increase since 1913 of 304,136 suites in this type of building. The distribution of residential suites shows the following changes between 1913 and 1930:

In 1913 one-half of all suites were in old-law tenements, one-quarter in new-law tenements, and one-quarter in one and two family houses. In 1930, 26.8 per cent of all suites were in old-law tenements, 42.7 per cent in new-law tenements, 14.7 per cent in 1-family dwellings, and 15.8 per cent in 2-family houses.

Rentals

THE amount of shelter provided is only one factor in the housing problem; the rent at which it can be obtained is of paramount importance to the worker. The following table shows the distribution, by monthly rent per room, of suites in the multifamily dwellings put up in New York City exclusive of the Borough of Richmond, and

in Manhattan alone, during the four years 1927 to 1930. It is noted that rents were not obtainable for all apartments.

TABLE 1.—DISTRIBUTION, ACCORDING TO MONTHLY ROOM RENTS, OF APARTMENTS IN MULTIFAMILY DWELLINGS CONSTRUCTED, 1927 TO 1930

Monthly rent per room	New York City (exclusive of Richmond)		Manhattan	
	Number	Per cent	Number	Per cent
Under \$12.50.....	3,665	1.73	113	0.34
\$12.50 to \$13.49.....	5,316	2.50	369	1.11
\$13.50 to \$14.49.....	8,440	3.97	43	.14
\$14.50 to \$15.49.....	17,985	8.47	1
\$15.50 to \$16.49.....	19,687	9.27	179	.54
\$16.50 to \$17.49.....	17,824	8.39	283	.85
\$17.50 to \$18.49.....	17,960	8.46	455	1.37
\$18.50 to \$19.49.....	16,062	7.56	957	2.87
\$19.50 to \$24.49.....	57,904	27.29	4,861	14.61
\$24.50 to \$29.49.....	18,935	8.91	3,940	11.84
\$29.50 and over.....	28,571	13.45	22,072	66.33
Total.....	212,409	100.00	33,278	100.00

In connection with this table it is pointed out in the report that during four years of construction only 1.7 per cent of the total number of apartments erected in all the boroughs except Richmond rented for less than \$12.50 per room a month, and that about one-third of these were found in the projects erected under the terms of the State housing law. Since it is deemed almost impossible for a worker to spend more than one-fourth of his earnings in rent, this means that the provision of approved housing within the reach of the ordinary wage earner has been strikingly small. From its survey of the whole situation, the report draws two conclusions:

1. We have a heritage of over 67,000 old-law buildings offering shelter for 528,000 families. These buildings have outlived economic justification and offer a challenge to the social conscience of the community that sustains them.

2. New housing supplied by the building industry, as it passes through alternating periods of booms and depressions, succeeds only at rentals that are out of reach of the majority of the population.

Amount and Kind of Housing Supplied by Limited-Dividend Corporations

THE State law of 1926 provided that in order to secure tax exemption, the limited-dividend corporations must erect their buildings under the supervision of the State housing board and in accordance with its specifications. So far, the work completed under this law consists of 11 different projects, comprising 1,918 apartments used for dwelling purposes, with a total of 7,356 rooms, including 44 dining alcoves and 11 bathrooms counted as half rooms. Under the terms of the State law, these projects are all conservatively financed, with a view to making them attractive for investment rather than for speculative purposes. The average rent may not be more than \$12.50 per room per month, and dividends may not exceed 6 per cent. If, after due provision for management, maintenance and amortization, returns would permit a larger dividend, rents must be reduced. The State board of housing exercises a close supervision over plans and construction and enforces standards as to size of rooms, coverage of area, provision of light and air, cross ventilation, sanitation and

the like, far superior to those usually found in low-rental building. Generally speaking, the board's approval is limited to sites which are large enough and so situated as to permit the development of projects with low coverage and in accordance with modern principles of site planning. Looking upon it as a duty to prove that superior types of dwellings are possible at relatively low cost, the board will not approve any project which is not suitably adapted to its surroundings and which is not so planned as to secure adequate light and air and necessary privacy for every apartment. In general, apartments may be only two rooms deep, thus securing complete through ventilation, and in the large projects, a number of valuable facilities are provided, such as clubrooms, playgrounds, and the like.²

Rentals

AT THE time the figures were compiled for this report the rent schedule of one project under the supervision of the housing board was not available. The other 10 completed projects comprised 1,789 apartments containing 6,852 rooms, excluding those occupied by superintendents or used for commercial purposes. The monthly rent of the apartments ranged from \$15, charged for each of four 1.5 room apartments, to between \$75 and \$80 for 10 five-room apartments, the average monthly rent per room varying from \$10.74 to \$12.50. The monthly rent per room and the number and per cent of rooms at each figure are shown, separately and cumulatively, in the following table:

TABLE 2.—DISTRIBUTION, BY MONTHLY RENTAL, OF ROOMS IN 10 COMPLETED PROJECTS UNDER THE STATE HOUSING LAW

Monthly rent per room	Number of rooms		Per cent of total rooms	Cumulative per cent
	Total	Total, cumulated		
\$8.00 to \$8.49	5	5	0.07	0.07
\$8.50 to \$8.99	12	17	.18	.25
\$9.00 to \$9.49	344	361	5.02	5.27
\$9.50 to \$9.99	480	841	7.00	12.27
\$10.00 to \$10.49	940.5	1,781.5	13.72	25.99
\$10.50 to \$10.99	1,519.5	3,301	22.17	48.16
\$11.00 to \$11.49	1,388.5	4,689.5	20.26	68.42
\$11.50 to \$11.99	510.5	5,200	7.45	75.87
\$12.00 to \$12.49	876	6,076	12.79	88.66
\$12.50 to \$12.99	328	6,404	4.79	93.45
\$13.00 to \$13.49	131	6,535	1.91	95.36
\$13.50 to \$13.99	101.5	6,636.5	1.48	96.84
\$14.00 to \$14.49	68.5	6,705	1.00	97.84
\$14.50 to \$14.99	8	6,713	.12	97.96
\$15.00 to \$15.49	124.5	6,837.5	1.82	99.78
\$15.50	7	6,844.5	.10	99.88
\$17.50	8	6,852.5	.12	100.00
Total	6,852.5		100.00	

A rental of \$12.50 per room per month is looked upon as the outside limit of what the average worker can pay for housing. It will be noted that of the 6,852.5 rooms listed in this table very nearly 90 per cent are within this limit, nearly half are under \$11, and one-eighth (12.27 per cent) are under \$10. The board looks upon this as a

² Descriptions of some of these buildings may be found in the Labor Review, August, 1928, p. 1, and September, 1929, p. 106.

demonstration that, by means of large-scale economies and careful planning, excellent housing can be provided, even in a large city, at rentals within the reach of the great mass of workers.

Some Effects of Tax Exemption

IN DISCUSSING this topic it is emphatically stated that tax exemption without careful regulation is not desirable.

Without the proper safeguards tax exemption will neither lower rents nor improve standards. Unfortunately, a striking illustration of this situation was witnessed in New York City during the last decade, when the city of New York took advantage of the amendment to the State law which granted municipalities the right to exempt from taxes residential buildings whose construction was begun before April 1, 1924. The result, as we have pointed out in previous reports, was the production of one and two family dwellings of decidedly inferior quality, mostly in Brooklyn and Queens, at rents that were considerably above the price that could be paid by families with modest incomes.

But, given proper regulation, tax exemption indubitably aids in the production of desirable housing at lower rents than could be afforded otherwise. Without it, rents in the housing provided by the limited-dividend corporations would have to be increased as follows:

	Amount of rental increase per room per month
Amalgamated Housing Corporation:	
Units 1 to 6.....	\$2. 09
Units 7 to 8.....	3. 00
Amalgamated Dwellings (Inc.).....	2. 49
Academy Housing Corporation.....	1. 59
Brooklyn Garden Apartments (Inc.):	
Fourth Avenue.....	1. 94
Navy Yard.....	1. 27
Farband Housing Corporation.....	1. 94
Manhattan Housing Corporation.....	2. 64
Stanton Homes Corporation.....	3. 18
Average for 9 projects.....	2. 24

It is interesting to note that the principal factor producing the variations shown in the room rental increases is the difference in the average room sizes. Buildings with smaller rooms experience the lowest savings and those with the larger rooms the greatest savings. In other words, limited-dividend companies that provide the highest accommodations to tenants—as measured by room sizes—receive the greatest benefits from tax exemption.

Cost of Tax Exemption to the Municipality

IN CONSIDERING the effect of tax exemption upon the city's revenues, it must be remembered that the exemption is not upon the total cost of the site and building combined, but upon either the cost or appraisal value, whichever is the lower, of the improvements. The actual amount granted in tax exemptions by New York City to the State Board of Housing projects was \$50,763 in 1929, \$89,992 in 1930, and \$119,859 in 1931, a total of \$260,613 for the three years. Considering only the financial aspect, attention is called to the fact that this is, at least in part, offset by the fact that operation of limited-dividend corporations tends to improve the neighborhood in slum areas and to accelerate the building up of new localities in outlying regions with increasing revenues to the city. From any other standpoint the board feels that the sum lost through tax exemption is a small amount to pay for the advantage of securing improved housing

at rentals the worker can meet, and for the demonstration these projects afford of the fact that the provision of housing in New York has been allowed to develop along unnecessarily expensive and undesirable lines.

Every structure erected in terms of the board's standards is a challenge to the community to rid itself of a system that provides homes by letting the small owner hold the bag while the land developer parcels out the city's undeveloped land into 20 or 25 foot lots, the second mortgagee charges the hard-pressed owners an interest of 9 to 15 per cent, the builder erects ugly rows of single and 2-family houses, and apartment houses crowd the land to the maximum permitted by law.

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in Air Transportation, 1931

THIS article presents the results of a study in 1931 by the Bureau of Labor Statistics of hours and earnings of commercial air-transportation employees in the United States. The study was limited to pilots and copilots operating heavier-than-air machines on scheduled mail and passenger routes, and to the ground personnel used in the operation and repair of such machines; it covered approximately 95 per cent of such workers, 3,509 males and 88 females employed by 26 transportation companies serving 138 cities in 40 States and the District of Columbia. Employees engaged in the operation of sight-seeing, crop dusting, mapping and surveying, and flying-instruction machines were not included.

The study showed that while the average full-time flight hours of pilots are fixed by the Department of Commerce at a maximum of 110 per month, the hours actually flown in October, 1931, when the study was made, averaged only 80.4.

The actual earnings of pilots during the month averaged \$569.49 and those of copilots \$227.89. Those of all other employees combined averaged \$31.66 per week.

Average hours and earnings are shown by districts in Table 1 for pilots, in Table 2 for copilots, and in Table 3 for each of the other important occupations in commercial transportation and also for a group, designated as "Other employees," including occupations having too few employees to warrant separate occupational tabulation. The wage figures are shown by districts, instead of by States or cities, in order to avoid showing averages for one company and thus possibly revealing its identity. The States included in each of the geographic districts shown are as follows:

North Atlantic.—Massachusetts, New Jersey, New York, and Pennsylvania.

South Atlantic.—Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and the District of Columbia.

East North Central.—Illinois, Indiana, Michigan, Ohio, and Wisconsin.

South Central.—Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas.

West North Central.—Iowa, Kansas, Minnesota, Missouri, Nebraska, and North Dakota.

Western.—Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming.

It is the policy of the bureau, whenever possible, to bring wage figures to a common basis of one week when the pay periods of the different companies are for varying lengths of time. Weather conditions are a great factor in flight activities. It was found that all planes of a company on one route might be kept from flight for an entire week while those on another route of that company during the same week would be operated every day of the week as scheduled.

Consequently wage figures for the flight personnel (pilots and co-pilots) were collected by the bureau for the entire month of October, 1931, for each company covered in the study. Wage figures for the ground personnel of each company were collected for a whole pay period in October and then converted to a weekly basis in order that the hours and earnings of such employees might be as nearly as possible comparable with those of other industries for which figures are published by the bureau.

Each transport company maintains at large terminal and intermediate airports a force of employees ranging from a few operation mechanics and radio operators and repairers to a large organization including all the occupations for which wage figures are shown in this report. As many as six or seven companies may each maintain a force of employees at large terminal airports; in such cases each force was counted a "local unit."

Hours and Earnings of Pilots, 1931, by Districts

PILOTS must possess a high degree of skill and resourcefulness and considerable intelligence and experience. Each one must have a United States Department of Commerce transport license, rating him according to his experience on various weights and types of aircraft. From the time he steps into the plane until he leaves it, the pilot has complete command. He operates the controls of the plane at all times during its flight, unless he has a copilot to relieve him; a great majority of the pilots, however, are not accompanied by copilots.

Full-time flight hours of pilots are regulated by the United States Department of Commerce. A pilot employed in interstate passenger air-transport service shall not be on flight duty more than 110 hours in any one month, nor 30 hours in any 7-day period, nor 8 hours in any 24-hour period. He must also be granted a rest period of at least 24 consecutive hours within each 7-day period. Certain latitude, however, is allowed when necessary for reasonable schedules.

Although the maximum flight-hours are 110 per month, the hours actually flown during the month studied averaged only 80.4. The average in the various districts ranged from 76.2 in the Western district to 86.7 in the South Central district. The proportion of full-time that was actually flown ranged from 69.3 per cent in the Western to 78.8 per cent in the South Central district. The per cent for all districts combined was 73.1, thus showing 26.9 per cent of lost time during the month.

Average actual earnings in one month ranged from \$482.45 for the South Central to \$617.84 for the South Atlantic district, and for all districts combined were \$569.49.

Average earnings per flight-hour ranged from \$5.565 for the South Central to \$8.066 for the Western district; for all districts combined they were \$7.084.

At full time (110 hours per month), with the hourly earnings shown above—\$7.084—these employees would have earned \$779.19. In the various districts average full-time earnings would have ranged from \$612.17 for the South Central to \$887.28 for the Western district.

In a small number of companies the pilots are paid a monthly salary regardless of the number of hours flown during the month. In the majority of companies, however, the pilots receive a monthly salary

plus a specified rate for each mile flown. The mileage rate for night flying is generally higher than for day flying (in some companies twice as high). The rates also vary according to the terrain of the route. Actual figures showing monthly salaries and mileage rates separately could not be published, however, without the possibility of revealing the identity of some of the companies.

TABLE 1.—AVERAGE HOURS AND EARNINGS OF PILOTS AND PER CENT OF FULL TIME FLOWN IN ONE MONTH, 1931, BY DISTRICT

District	Number of local units	Number of pilots	Average full-time flight-hours per month ¹	Hours actually flown in one month		Average earnings per flight-hour ³	Average full-time earnings per month	Average actual earnings in one month ⁴
				Average number ²	Per cent of full time			
North Atlantic.....	12	46	110.0	84.1	76.5	\$7.284	\$801.19	\$612.87
East North Central.....	24	123	110.0	79.4	72.2	6.929	762.22	550.22
West North Central.....	12	81	110.0	78.4	71.3	6.906	759.65	541.47
South Atlantic.....	10	45	110.0	85.8	78.0	7.199	791.89	617.84
South Central.....	16	53	110.0	86.7	78.8	5.565	612.17	482.45
Western.....	24	112	110.0	76.2	69.3	8.066	887.28	614.86
Total.....	98	460	110.0	80.4	73.1	7.084	779.19	569.49

¹ Regulated by the United States Department of Commerce.

² Computed by dividing total hours actually flown during month by the employees covered.

³ Computed by dividing actual earnings in one month by hours actually flown in month.

⁴ Computed by dividing total actually earned in month by number of pilots covered.

Days, Hours, and Earnings of Copilots, 1931, by Districts

Copilots usually hold a United States Department of Commerce transport license and are qualified to operate the controls of the plane when called on to relieve the pilot. On planes equipped with radio they must also have a radio operator's license permitting them to maintain communication by radio with ground stations. On long flights they often act as stewards, serving meals en route and providing for the comfort of the passengers.¹

Table 2 shows, for the copilots covered in each geographic district and in all districts combined, average days and hours per month and average earnings per month and per hour. Average earnings are shown for their work as copilots, as acting pilots, and in both capacities. Figures for copilots are not shown for the South Atlantic district, due to the fact that flying in this district was from base ports in adjacent districts where data for them are shown.

Except for the regular relief day every seven days, the copilots report for duty every day or every other day, depending upon the schedule arranged. In the month studied (October, 1931) 65 of the copilots were supposed to be on duty for 15 days and 73 for 27 days.

Average full-time days in one month ranged by districts from 19.8 for the North Atlantic to 22.8 for the Western district; the average for all districts combined was 21.2. Due to the schedule, copilots have full-time hours of either 120 or 216 per month. Of the 138 copilots included in this study, the full-time hours of 47 per cent were 120 per month and those of 53 per cent were 216 per month. The

¹ One company includes a hostess among its flight personnel and one company has a stewardess on certain of its routes. For obvious reasons, data for these two occupations are not shown.

range, by districts, was from 158.4 for the North Atlantic to 182.7 for the Western district, and the average for all districts was 170 hours.

Since it was impossible to get actual flight-hours for copilots except when they were on duty as pilots, data on this point and on actual earnings per flight-hour can not be shown for them.

With few exceptions, copilots are paid a straight monthly salary regardless of the mileage flown in the month. Their only additional earnings are for work as acting pilot. For work as copilot only, the average full-time earnings in one month ranged from \$198.16 for the West North Central to \$238.21 for the Western district, and for all districts were \$218.26. The average earnings per hour ranged from \$1.162 for the West North Central to \$1.422 for the North Atlantic district, and for all districts were \$1.284.

Table 2 shows that in the month covered by the study 12 copilots (4 in the North Atlantic, 3 in the East North Central, and 5 in the Western district) acted as pilots. Their earnings in this capacity, averaging \$110.69 each for the month, were sufficient to raise earnings per month for the whole group of copilots from an average of \$218.26 to \$227.89, and earnings per hour from \$1.284 to \$1.341.

TABLE 2.—AVERAGE DAYS AND HOURS WORKED BY COPILOTS, AND EARNINGS FOR REGULAR AND ADDITIONAL WORK, 1931, BY DISTRICT

District	Number of local units	Number of co-pilots	Average full time in 1 month		Earnings for copilot work only		Earnings for additional work as acting pilot		Total earnings	
			Days	Hours ¹	Average in 1 month	Per hour ²	Number of employees having	Average in 1 month	Average in 1 month	Average per hour
North Atlantic.....	6	20	19.8	158.4	\$225.21	\$1.422	4	\$154.00	\$256.01	\$1.616
East North Central.....	10	48	20.3	162.0	208.21	1.285	3	33.27	210.29	1.298
West North Central.....	4	19	21.3	170.5	198.16	1.162	—	—	198.16	1.162
South Central.....	5	13	22.4	179.1	215.77	1.205	—	—	215.77	1.205
Western.....	9	38	22.8	182.7	238.21	1.304	5	122.49	254.32	1.392
Total.....	34	138	21.2	170.0	218.26	1.284	12	110.69	227.89	1.341

¹ Computed by dividing total full-time hours by number of copilots.

² Based on average full-time hours and earnings in 1 month.

Days, Hours, and Earnings of Other Employees

TABLE 3 shows average days, hours, and earnings for each district and for all districts combined for males in each of the occupations and in all occupations combined in commercial air transportation, except pilots and copilots. Females were employed as traffic agents, clerks, stenographers, seamstresses, fabric workers, and the groups of other employees, skilled and unskilled; because of the small number in any one of the occupations in the industry, no separate occupational classification is given for them, but an average is shown for all occupations combined.

Approximately 10 per cent of the employees in this table were paid hourly rates for the hours actually worked during the pay period covered by the study and 90 per cent were paid weekly, monthly, or yearly salaries based on full time, regardless of the number of hours actually worked during the period. The salary of each employee

whose rate was for a month or year was reduced to a weekly rate. The full-time hours per week of each salaried employee and his weekly rate were used in computing average earnings per hour. Therefore, the fifth column of Table 3 is headed "hours credited in one week" instead of "average hours actually worked in one week" as in wage reports for other industries.

TABLE 3.—AVERAGE DAYS, HOURS, AND EARNINGS, 1931, IN SPECIFIED OCCUPATIONS, BY DISTRICT

Occupation, sex, and district	Number of local units	Number of employees	Average days on which employees worked in 1 week	Average full-time hours per week	Hours credited in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
Agents, traffic, male:									
North Atlantic.....	13	21	6.0	48.0	48.0	100.0	\$0.576	\$27.65	\$27.65
East North Central.....	22	43	6.0	48.0	48.0	100.0	.649	31.17	31.17
West North Central.....	13	16	6.1	47.3	47.3	100.0	.701	33.12	33.12
South Atlantic.....	17	23	6.0	48.1	48.1	100.0	.555	26.69	26.69
South Central.....	22	41	6.0	48.2	48.2	100.0	.603	29.04	29.04
Western.....	16	31	5.9	48.2	47.2	97.9	.689	33.20	32.49
Total.....	103	175	6.0	48.0	47.8	99.6	.629	30.17	30.07
Chauffeurs, male:									
North Atlantic.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
East North Central.....	7	20	6.1	48.2	49.4	102.5	.528	25.45	26.09
West North Central.....	3	6	5.8	48.0	46.7	97.3	.500	23.98	23.31
South Atlantic.....	1	5	(1)	(1)	(1)	(1)	(1)	(1)	(1)
South Central.....	2	2	6.5	52.0	52.0	100.0	.333	17.31	17.31
Western.....	3	5	6.0	48.0	48.0	100.0	.620	29.77	29.77
Total.....	17	41	6.0	48.3	48.7	100.8	.558	26.93	27.14
Clerks, stenographers, male:									
North Atlantic.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
East North Central.....	11	23	6.0	48.0	48.0	100.0	.478	22.96	22.96
West North Central.....	8	16	6.0	48.0	48.0	100.0	.534	25.65	25.65
South Atlantic.....	6	24	6.0	48.0	48.0	100.0	.620	29.74	29.74
South Central.....	8	25	6.0	48.7	48.7	100.0	.487	23.73	23.73
Western.....	9	18	6.0	48.0	48.0	100.0	.661	31.74	31.74
Total.....	43	107	6.0	48.2	48.2	100.0	.551	26.54	26.54
Crew chiefs, male:									
North Atlantic.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
East North Central.....	9	25	6.1	49.2	51.7	105.1	.838	41.22	43.31
West North Central.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
South Atlantic.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
South Central.....	2	2	6.0	48.0	48.0	100.0	.837	40.19	40.19
Total.....	14	44	6.0	48.7	50.1	103.0	.902	43.91	45.17
Dispatchers, male:									
North Atlantic.....	7	23	5.6	48.8	48.8	100.0	.559	27.26	27.26
East North Central.....	11	27	6.0	48.0	48.0	100.0	.608	29.17	29.17
West North Central.....	4	9	6.0	48.0	48.0	100.0	.663	31.82	31.82
South Atlantic.....	11	26	5.8	48.3	48.3	100.0	.549	26.54	26.54
South Central.....	10	17	6.0	45.9	45.9	100.0	.520	23.86	23.86
Western.....	9	16	6.0	48.0	48.0	100.0	.718	34.46	34.46
Total.....	52	118	5.9	47.9	47.9	100.0	.592	28.37	28.37
Inspectors, male:									
North Atlantic.....	3	5	6.0	48.0	48.0	100.0	1.038	49.84	49.84
East North Central.....	3	9	6.2	47.6	50.6	106.3	.863	41.07	43.63
West North Central.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
South Atlantic.....	2	2	6.0	48.0	48.0	100.0	1.022	49.04	49.04
South Central.....	2	3	6.0	49.7	49.7	100.0	.953	47.31	47.31
Western.....	2	3	6.0	48.0	49.7	103.5	1.031	49.50	51.22
Total.....	13	25	6.1	48.0	49.6	103.0	.945	45.37	46.87

¹ Data included in the total but not given separately, to avoid identification.

TABLE 3.—AVERAGE DAYS, HOURS, AND EARNINGS, 1931, IN SPECIFIED OCCUPATIONS, BY DISTRICT—Continued

Occupation, sex, and district	Number of local units	Number of employees	Average days on which employees worked in 1 week	Average full-time hours per week	Hours credited in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
Janitors, male:									
North Atlantic.....	4	7	6.0	51.4	51.4	100.0	\$0.396	\$20.36	\$20.36
East North Central.....	9	28	6.3	54.7	55.5	101.5	.328	17.93	18.19
West North Central.....	4	6	6.2	60.0	58.7	97.8	.402	24.11	23.58
South Atlantic.....	3	7	6.0	51.4	51.4	100.0	.272	14.01	14.01
South Central.....	5	9	6.2	51.1	51.1	100.0	.282	14.39	14.39
Western.....	5	16	6.1	49.7	49.7	100.0	.485	24.11	24.11
Total.....	30	73	6.2	53.0	53.2	100.4	.362	19.21	19.27
Machinists and toolmakers, male:									
East North Central.....	5	10	6.2	46.4	58.3	125.6	.756	35.09	44.12
West North Central.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
South Central.....	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Western.....	2	5	6.0	48.0	48.1	100.2	.721	34.61	34.68
Total.....	9	19	6.1	47.2	53.5	113.3	.754	35.58	40.36
Mechanics, airplane, licensed, male:									
East North Central.....	5	25	6.1	46.3	52.0	112.3	.766	35.45	39.81
West North Central.....	3	32	5.3	48.0	46.8	97.5	.676	32.44	31.67
South Atlantic.....	3	16	6.2	48.0	53.9	112.3	.749	35.93	40.33
South Central.....	4	7	6.0	48.9	50.5	103.3	.650	31.79	32.84
Western.....	8	82	6.1	48.0	53.1	110.6	.748	35.91	39.75
Total.....	23	162	6.0	47.8	51.7	108.2	.734	35.08	37.92
Mechanics, engine, licensed, males:									
North Atlantic.....	4	9	6.0	48.0	48.0	100.0	.791	37.98	37.98
East North Central.....	10	46	6.1	47.3	52.0	109.9	.704	33.32	36.64
West North Central.....	3	27	5.7	48.0	47.4	98.8	.717	34.43	34.02
South Atlantic.....	3	20	6.0	48.0	48.9	101.9	.852	40.87	41.64
South Central.....	3	16	5.8	50.1	48.6	97.0	.722	36.18	35.10
Western.....	8	32	5.9	48.0	49.5	103.1	.747	35.85	37.00
Total.....	31	150	5.9	48.0	49.6	103.3	.742	35.61	36.83
Mechanics, airplane and engine, licensed, males:									
North Atlantic.....	12	72	6.0	48.0	49.1	102.3	.783	37.60	38.48
East North Central.....	27	132	6.1	48.6	51.7	106.4	.711	34.54	36.78
West North Central.....	18	67	6.0	48.1	48.4	100.6	.700	33.66	33.87
South Atlantic.....	10	59	6.0	48.0	48.1	100.2	.806	38.70	38.78
South Central.....	19	99	6.0	49.5	49.7	100.4	.721	35.67	35.85
Western.....	29	159	6.0	48.0	48.8	101.7	.778	37.33	37.92
Total.....	115	588	6.0	48.4	49.5	102.3	.747	36.16	37.01
Mechanics, airplane or engine, not licensed, males:									
North Atlantic.....	5	9	6.2	48.0	49.4	102.9	.653	31.33	32.27
East North Central.....	7	51	6.0	47.1	53.3	113.2	.641	30.19	34.18
West North Central.....	3	31	5.0	48.0	44.8	93.3	.573	27.50	25.68
South Atlantic.....	5	39	6.0	48.0	48.8	101.7	.647	31.05	31.59
South Central.....	2	24	5.9	49.1	49.2	100.2	.721	35.41	35.52
Western.....	6	16	6.0	48.0	49.0	102.1	.615	29.51	30.10
Total.....	28	170	5.8	47.9	50.0	104.4	.641	30.68	31.74
Mechanics, chiefs, males:									
North Atlantic.....	7	7	6.0	48.0	49.6	103.3	1.077	51.67	53.36
East North Central.....	14	25	6.0	47.3	48.1	101.7	1.037	49.06	49.91
West North Central.....	8	17	6.1	48.0	49.5	103.1	1.088	52.23	53.84
South Atlantic.....	6	10	6.0	48.0	48.0	100.0	1.197	57.46	57.46
South Central.....	10	17	6.0	48.7	48.7	100.0	1.016	49.52	49.52
Western.....	25	43	6.0	48.2	48.3	100.2	1.069	51.53	51.59
Total.....	70	119	6.0	48.0	48.5	101.0	1.069	51.30	51.86
Mechanics' helpers, licensed, males:									
North Atlantic.....	2	3	6.3	48.0	50.7	105.6	.603	28.96	30.57
East North Central.....	15	34	6.1	47.3	50.1	105.9	.534	25.28	26.76
West North Central.....	6	8	6.3	47.3	49.1	103.8	.593	28.06	29.12
South Atlantic.....	3	6	6.0	48.0	48.0	100.0	.529	25.39	25.39
South Central.....	2	4	6.0	50.5	50.2	99.4	.570	28.76	28.57
Western.....	5	5	6.0	48.0	48.0	100.0	.555	26.63	26.63
Total.....	33	60	6.1	47.7	49.6	104.0	.549	26.20	27.24

¹ Data included in the total but not given separately, to avoid identification.

WAGES AND HOURS OF LABOR

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TABLE 3.—AVERAGE DAYS, HOURS, AND EARNINGS, 1931, IN SPECIFIED OCCUPATIONS, BY DISTRICT—Continued

Occupation, sex, and district	Number of local units	Number of employees	Average days on which employees worked in 1 week	Average full-time hours per week	Hours credited in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
Mechanics' helpers, not licensed, males:									
North Atlantic	7	28	6.1	48.0	49.6	103.3	\$0.483	\$23.19	\$23.96
East North Central	17	72	6.0	49.7	51.8	104.2	.384	19.07	19.88
West North Central	11	51	6.0	47.9	48.1	100.4	.420	20.12	20.21
South Atlantic	10	57	6.1	48.0	51.1	106.5	.441	21.19	22.55
South Central	10	42	6.0	49.2	50.0	101.6	.466	22.92	23.29
Western	22	82	6.0	48.0	49.2	102.5	.479	23.01	23.57
Total	77	332	6.0	48.5	50.0	103.1	.441	21.39	22.08
Porters, males:									
North Atlantic	3	5	6.0	48.0	48.0	100.0	.361	17.31	17.31
East North Central	6	9	6.0	48.0	48.0	100.0	.174	8.35	8.35
West North Central	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
South Atlantic	11	16	6.0	48.0	48.0	100.0	.207	9.93	9.93
South Central	6	11	6.1	48.7	48.7	100.0	.250	12.17	12.17
Western	1	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total	28	44	6.0	48.2	48.2	100.0	.240	11.54	11.54
Radio mechanics, males:									
North Atlantic	5	8	6.0	48.0	48.0	100.0	.749	35.96	35.96
East North Central	4	20	6.0	48.0	48.0	100.0	.725	34.81	34.81
West North Central	3	15	5.9	48.0	47.7	99.4	.716	34.37	34.12
South Atlantic	3	15	6.0	48.0	48.0	100.0	.637	30.58	30.58
South Central	6	11	6.0	48.0	48.0	100.0	.751	36.07	36.07
Western	3	25	6.0	48.0	48.0	100.0	.624	29.94	29.94
Total	24	94	6.0	48.0	47.9	99.8	.688	33.01	32.97
Radio operators, males:									
North Atlantic	10	20	6.0	48.0	48.0	100.0	.705	33.85	33.85
East North Central	10	24	6.0	48.0	48.0	100.0	.646	31.00	31.00
West North Central	13	27	6.0	48.0	48.0	100.0	.681	32.71	32.71
South Atlantic	11	21	6.0	48.0	48.0	100.0	.719	34.50	34.50
South Central	14	30	6.2	49.9	49.9	100.0	.711	35.43	35.43
Western	23	62	6.0	48.4	48.4	100.0	.751	36.36	36.36
Total	81	184	6.1	48.4	48.4	100.0	.712	34.49	34.49
Stock clerks, males:									
North Atlantic	2	4	6.0	48.0	48.0	100.0	.535	25.68	25.68
East North Central	6	19	6.1	46.7	50.2	107.5	.559	26.11	28.09
West North Central	3	13	5.9	48.0	47.3	98.5	.496	23.80	23.47
South Atlantic	3	13	6.0	48.0	48.0	100.0	.514	24.68	24.68
South Central	3	10	6.0	49.8	49.8	100.0	.601	29.89	29.89
Western	7	23	6.0	48.0	48.0	100.0	.599	28.75	28.75
Total	24	82	6.0	47.9	48.6	101.5	.557	26.70	27.10
Other employees, skilled, males:									
North Atlantic	9	13	6.0	48.2	49.9	103.5	.801	38.62	40.01
East North Central	11	40	6.1	47.8	50.3	105.2	.817	39.05	41.08
West North Central	9	22	5.4	47.7	41.9	87.8	.851	40.58	35.68
South Atlantic	9	28	6.0	48.1	48.1	100.0	.864	41.52	41.52
South Central	8	16	6.1	49.0	49.2	100.4	.645	31.61	31.73
Western	7	24	6.0	48.0	47.9	99.8	.859	41.23	41.11
Total	53	143	5.9	48.0	48.0	100.0	.817	39.19	39.19
Other employees, unskilled, males:									
North Atlantic	6	7	6.1	52.9	52.9	100.0	.363	19.19	19.19
East North Central	9	23	6.4	55.3	57.9	104.7	.380	21.00	21.99
West North Central	3	15	5.8	52.4	49.4	94.3	.434	22.73	21.41
South Atlantic	3	56	6.0	48.0	48.8	101.7	.381	18.30	18.62
South Central	10	65	6.1	51.2	51.4	100.4	.364	18.65	18.73
Western	5	15	6.3	55.7	59.2	106.3	.445	24.76	26.30
Total	36	181	6.1	51.3	52.0	101.4	.384	19.72	19.98

¹ Data included in the total but not given separately, to avoid identification.

TABLE 3.—AVERAGE DAYS, HOURS, AND EARNINGS, 1931, IN SPECIFIED OCCUPATIONS, BY DISTRICT—Continued

Occupation, sex and district	Number of local units	Number of employees	Average days on which employees worked in 1 week	Average full-time hours per week	Hours credited in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
All employees, males:									
North Atlantic	22	250	6.0	48.3	49.0	101.4	\$0.678	\$32.76	\$33.26
East North Central	39	705	6.1	48.5	51.1	105.4	.629	30.49	32.16
West North Central	28	385	5.8	48.3	47.6	98.6	.640	30.96	30.50
South Atlantic	30	454	6.0	48.1	48.9	101.7	.603	29.00	29.48
South Central	49	454	6.0	49.4	49.5	100.2	.597	29.51	29.58
Western	46	663	6.0	48.3	49.4	102.3	.712	34.37	35.13
Total	214	2,911	6.0	48.5	49.5	102.1	.645	31.26	31.89
All employees, females:									
North Atlantic	2	4	6.0	48.0	48.0	100.0	.445	21.35	21.35
East North Central	8	15	6.0	48.0	48.0	100.0	.493	23.65	23.65
West North Central	6	9	6.0	48.0	48.0	100.0	.535	25.68	25.68
South Atlantic	7	22	6.0	48.0	48.0	100.0	.517	24.82	24.82
South Central	5	11	6.0	48.0	48.0	100.0	.474	22.76	22.76
Western	8	27	6.0	48.0	48.0	100.0	.487	23.39	23.39
Total	36	88	6.0	48.0	48.0	100.0	.497	23.85	23.85
All employees, males and females:									
North Atlantic	22	254	6.0	48.3	49.0	101.4	.675	32.59	33.07
East North Central	39	720	6.1	48.5	51.1	105.4	.626	30.36	31.98
West North Central	28	394	5.8	48.3	47.6	98.6	.639	30.84	30.39
South Atlantic	30	476	6.0	48.1	48.9	101.7	.599	28.82	29.27
South Central	49	465	6.0	49.3	49.5	100.4	.595	29.31	29.42
Western	46	690	6.0	48.3	49.3	102.1	.703	33.96	34.67
Total	214	2,999	6.0	48.5	49.4	101.9	.640	31.05	31.66

Basic Salaries of Pilots and Copilots, October, 1931

THE basic monthly salaries of pilots (except 16 who were paid mileage rates only and 29 whose rates were not reported) and of copilots are shown in Table 4. Approximately 25 per cent of the pilots received only the basic salary, while 75 per cent also received mileage rates. The figures in the table do not include earnings for mileage flown.

TABLE 4.—NUMBER OF PILOTS AND COPILOTS, OCTOBER, 1931, BY BASIC SALARY PER MONTH

[Approximately 25 per cent of the pilots are paid salary only; others are paid salary and rates per mile flown]

Salary per month	Number of—		Salary per month	Number of—		Salary per month	Number of—	
	Pilots	Copilots		Pilots	Copilots		Pilots	Copilots
Under \$100	6		\$192 ¹	5		\$270		
\$100	2	1	\$200	30	21	\$275	1	
\$120	6		\$208 ¹	14		\$300	99	
\$125		7	\$210	1	3	\$350	14	
\$130	5		\$213	2		\$375	12	
\$140	3	1	\$217 ¹	16	11	\$400	11	
\$145		1	\$220	2		\$430	1	
\$150	37	6	\$225	13	46	\$450	2	
\$160	8	1	\$230	1	1	\$500	19	
\$163		1	\$233 ¹	5		\$525	3	
\$167 ¹	10		\$238	1		\$600	4	
\$170	4		\$240	2		\$775	2	
\$175	16	11	\$242 ¹	1		Mileage rate only	16	
\$180	4		\$248		7	Not reported	29	
\$183 ¹	16		\$250	27	5			
\$188	9		\$260	1				
\$190		15				Total	460	138

¹ Based on yearly salary.

Actual Earnings of Pilots and Copilots, October, 1931, by District

TABLE 5 shows for each geographic district and for all districts combined the number of pilots and of copilots in each classified group of earnings in October, 1931. The earnings for each person include his basic salary per month or proportionate part thereof for any portion of the month that he was on the pay rolls in the month and his mileage earnings for miles flown, if any.

Five of the 460 pilots covered in the study earned less than \$150 in October, due probably to the fact that they were not on the rolls the entire month and that their hours of flight were few or none in the month. The earnings of 4 pilots were between \$950 and \$1,000 in the month; in each case the amount included basic salary and earnings for mileage.

TABLE 5.—CLASSIFIED EARNINGS PER MONTH OF PILOTS AND COPILOTS, OCTOBER 1931, BY DISTRICT

Classified actual earnings in 1 month	Pilots							Copilots					
	North Atlantic	East North Central	West North Central	South Atlantic	South Central	West-ern	Total	North Atlantic	East North Central	West North Central	South Central	West-ern	Total
Under \$150	1		1		1	2	5		1	1		1	3
\$150 and under \$160					4		4	1		2			3
\$170 and under \$180			2				2		9		2		11
\$190 and under \$200								1	7	3	2	2	15
\$200 and under \$210								2	9	7	1	3	22
\$210 and under \$220						2	2	3	2			3	8
\$220 and under \$230			1		1		2	1	11	6	5	22	45
\$230 and under \$240						1	1	2					2
\$240 and under \$250					3		3	7	3				10
\$250 and under \$275		1	4		2		7		4		3	2	9
\$275 and under \$300	1		1				2	1	2				3
\$300 and under \$325	1	3	4	2	1	3	14					1	1
\$325 and under \$350		1	1		2	1	5						
\$350 and under \$400		21	7		2	5	35						
\$400 and under \$450		8	5	2	5	7	27						
\$450 and under \$500	1	4	4		6	9	24	1				1	2
\$500 and under \$550	12	20	6	14	5	5	62	1	2			1	2
\$550 and under \$600	3	25	14	5	4	9	60					2	2
\$600 and under \$650	9	11	12	3	2	19	56						
\$650 and under \$700	5	11	2	5	7	9	39						
\$700 and under \$750	4	8	1	7	7	9	36						
\$750 and under \$800	4	2	8	2	1	13	30						
\$800 and under \$850	1	3	4	2		13	23						
\$850 and under \$900	2	4	2	1		2	11						
\$900 and under \$950	2	1	1			2	6						
\$950 and under \$1,000			1	2		1	4						
Total	46	123	81	45	53	112	460	20	48	19	13	38	138

Average and Classified Full-Time Hours per Week, 1931, by Occupation

TABLE 6 shows for each of the occupations in air transportation, except pilots and copilots, average full-time hours per week and the per cent of employees at each specified number of hours per week.

Full-time hours per week are those established by a regular time of beginning and quitting work on each day of the week less any regular time off duty for dinner, lunch, or other meal.

The full-time hours per week of 86 per cent of the 2,911 males and of all of the females were 48.

TABLE 6.—AVERAGE AND CLASSIFIED FULL-TIME HOURS PER WEEK OF AIR-TRANSPORTATION EMPLOYEES, 1931, BY OCCUPATION

Occupation	Number of local units	Number of employees	Average full-time hours per week	Per cent of employees whose full-time hours per week were—												
				42 and under	44	48	50	50½	54	56	60	63	70	77 and over		
Agents, traffic, male	103	175	48.0	1	97	1	1	1	1	1						
Chauffeurs, male	17	41	48.3	2	93				5							
Clerks and stenographers, male	43	107	48.2		95		4		1							
Crew chiefs, male	14	44	48.7		89				11							
Dispatchers, male	52	118	47.9	1	88	11										
Inspectors, male	13	25	48.0		4	88		8								
Janitors, male	30	73	53.0		1	67			7	3	8	1	8	4		
Machinists and toolmakers, male	9	19	47.2		21	79										
Mechanics, airplane, licensed, male	23	162	48.7		10	86		2	2							
Mechanics, engine, licensed, male	31	150	48.0		11	75		10	3							
Mechanics, airplane and engine, licensed, male	115	588	48.4	(1)	1	87		7	4	1						
Mechanics, airplane or engine, not licensed, male	28	170	47.9		10	81		6	2							
Mechanics, chief, male	70	119	48.0		5	89		4	1	1						
Mechanics' helpers, licensed, male	33	60	47.7	2	10	88										
Mechanics' helpers, not licensed, male	77	332	48.5	(1)	4	82		5	8	(1)						
Porters, male	28	44	48.2			98				2						
Radio mechanics, male	24	94	48.0			100										
Radio operators, male	81	184	48.4			95				5						
Stock clerks, male	24	82	47.9		7	84		9								
Other employees, skilled, male	53	143	48.0	1	3	92	1	2	1	1						
Other employees, unskilled, male	36	181	51.3		1	73		15	1	3	1		1	7		
All employees, male	214	2,911	48.5	(1)	3	86	1	5	3	1	(1)	(1)	(1)	1		
All employees, female	36	88	48.0			100										
All employees, male and female	214	2,999	48.5	(1)	3	87	1	4	3	1	(1)	(1)	(1)	1		

¹ Less than 1 per cent.

Progress in Civil Aeronautics

AIR transportation of mail and passengers is a new industry. Table 7, taken from the May, 1932, Air Commerce Bulletin, of the United States Department of Commerce, shows that the number of commercial planes in transport service increased from 69 in 1926, the first year in which the industry was of material importance, to 128 in 1927, to 325 in 1928, to 525 in 1929, to 600 in 1930, and then dropped to 590 in 1931. The number of passengers carried increased from year to year from 5,782 in 1926 to 417,505 in 1930 and 522,345 in 1931.

Only one company was operating planes on schedule as early as 1919. The industry was reported as in the experimental state until 1928, when the operation of aircraft on scheduled routes really became a recognized public service.

TABLE 7.—PROGRESS IN CIVIL AERONAUTICS, 1926 TO 1931

Item	1926	1927	1928	1929	1930	1931
Pilots employed	(1)	107	308	562	675	690
Total personnel employed	(1)	462	1,496	2,345	3,475	4,290
Number of planes in transport service	69	128	325	525	600	590
Passengers carried on transport lines	5,782	8,679	49,713	173,405	417,505	522,345
Airplane-miles flown by all operators	4,318,087	5,870,489	10,673,450	25,141,499	36,945,203	47,385,987
Mileage of commercial airways in operation	8,404	9,122	16,667	36,321	49,549	50,398
Mileage of lighted airways	2,041	4,468	6,988	12,448	15,258	17,512
Electric and gas beacons	612	760	1,188	1,311	1,652	1,836
Municipal airports	(1)	240	368	453	550	636

¹ Not available.

Wages and Hours of Labor in the Dyeing and Finishing of Textiles, 1930 and 1932

THIS article presents summaries of the results of studies in 1930 and 1932 by the United States Bureau of Labor Statistics of wages and hours of labor of wage earners in the dyeing and finishing of textiles in the United States. The 1932 results will be published later in more detail in bulletin form.

The 1930 basic wage figures which were used in compiling this article were collected by agents of the bureau from the records of 109 representative dyeing and finishing plants in eight States for a pay period in March, April, or May and covered 21,482 wage earners, consisting of 17,739 males and 3,743 females. Figures for 1932 were collected from the records of 93 plants in the same States as in 1930, for a pay period in January, February, or March, and covered 19,246 wage earners, including 16,215 males and 3,031 females. The work of a vast majority of the plants included in the report consisted mainly in the dyeing and finishing of cotton textiles. In a few plants cloth made of mixtures of cotton and rayon was dyed and finished.

The 1932 wage figures in the tables of this article cover the wage earners of the dyeing and finishing department of 16 cotton mills that produce, dye, and finish cotton goods and for 77 plants that do nothing but the dyeing and finishing of textiles.

Average Hours and Earnings, 1930 and 1932, by Occupation

TABLE 1 shows for each of the 42 important occupations in the dyeing and finishing of textiles, for a group designated as "Other employees," and for all occupations combined average days, hours, and earnings in one week, average earnings per hour, and the per cent of full time worked in the week, in 1930 and in 1932. The group of "other employees" includes wage earners in occupations containing too few workers to warrant occupational tabulation.

The averages at the end of the table for males and females in all occupations combined, or for the industry as a whole, show that days worked in one week were 5.2 in 1930 and 1932; that full-time hours per week increased from 50.9 in 1930 to 51.3 in 1932; that hours actually worked in one week increased from 49.3 in 1930 to 49.9 in 1932; that they worked 96.9 per cent of full time in 1930 and 97.3 per cent in 1932; that earnings per hour decreased from 45.2 cents per hour in 1930 to 40 cents per hour in 1932; that full-time earnings per week decreased from \$23.01 in 1930 to \$20.52 in 1932, and that actual earnings in one week decreased from \$22.29 in 1930 to \$19.99 in 1932.

Average earnings per hour of males ranged in 1930 in the various occupations from 29 cents for yarn winders to \$1.247 for machine engravers, and those of females ranged from 28.1 cents for plaiters to 43.8 cents for batchers. In 1932 the averages of males ranged from 30.3 cents for pilers to \$1.021 for hand engravers, and those of females ranged from 24 cents for plaiters to 35.6 cents for measurers. Averages of males in 40, and of females in 12 occupations and of males and of females in the group of other occupations were less in 1932 than in 1930, and in 1 occupation for males were more in 1932 than in 1930.

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE DYEING AND FINISHING OF TEXTILES IN 1930 AND 1932, BY OCCUPATIONS

Occupation and sex	Year	Number of establishments	Number of wage earners	Average days on which employees worked in week	Average full-time hours per week	Hours actually worked in week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in week
						Average number	Per cent of full time			
Ager tenders, male.....	1930	23	114	5.5	51.4	61.3	119.3	\$0.435	\$22.36	\$26.67
	1932	24	111	5.2	51.3	56.7	110.5	.378	19.39	21.43
Back tenders, printing, male.....	1930	26	374	5.4	51.3	56.8	110.7	.466	23.91	26.44
	1932	27	414	4.8	51.4	52.9	102.9	.381	19.58	20.15
Balers, male.....	1930	36	85	5.0	51.7	44.9	86.8	.362	18.72	16.24
	1932	34	78	5.1	51.4	46.0	89.5	.331	17.01	15.24
Butchers (cloth winders), male.....	1930	41	309	5.3	49.9	48.3	96.8	.443	22.11	21.41
	1932	46	297	5.3	50.8	51.5	101.4	.377	19.15	19.42
Butchers (cloth winders), female.....	1930	4	34	4.8	48.3	38.9	80.5	.438	21.16	17.02
	1932	2	6	4.2	49.2	25.7	52.2	.331	16.29	8.50
Bath mixers, male.....	1930	27	51	5.1	50.1	49.8	99.4	.473	23.70	23.55
	1932	27	52	5.4	51.9	53.3	102.7	.394	20.45	20.96
Calender tenders, male.....	1930	72	537	5.2	51.4	50.7	98.6	.431	22.15	21.81
	1932	72	507	5.1	52.1	49.8	95.6	.383	19.95	19.06
Color mixers, male.....	1930	58	224	5.4	52.1	55.3	106.1	.489	25.48	27.06
	1932	39	231	5.2	52.5	57.6	109.7	.387	20.32	22.28
Dryer tenders, male.....	1930	82	804	5.1	51.2	51.6	100.8	.435	22.27	22.42
	1932	81	627	5.2	51.6	53.6	103.9	.375	19.35	20.09
Dryer tenders, female.....	1930	3	47	4.9	48.5	43.8	90.3	.299	14.50	13.10
	1932	2	16	3.8	48.3	31.4	65.0	.270	13.04	8.50
Dyeing-machine tenders, male.....	1930	96	1,618	4.9	50.6	48.6	96.0	.465	23.53	22.62
	1932	80	1,393	5.1	50.8	49.7	97.8	.415	21.08	20.61
Engravers, hand, male.....	1930	8	27	5.9	49.1	50.0	101.8	1.235	60.64	61.70
	1932	12	28	5.5	50.6	50.3	99.4	1.021	51.66	51.37
Engravers, machine, male.....	1930	14	37	5.8	49.4	50.7	102.6	1.247	61.60	63.18
	1932	12	32	4.7	52.7	42.4	80.5	.818	43.11	34.71
Floor men, male.....	1930	23	133	5.4	52.3	54.3	103.8	.466	24.37	25.31
	1932	49	366	5.1	50.4	47.8	94.8	.376	18.95	17.99
Folders, male.....	1930	57	456	5.2	51.3	47.1	91.8	.587	30.11	27.62
	1932	59	405	5.3	51.7	49.2	95.2	.498	25.75	24.47
Folders, female.....	1930	29	247	5.1	49.4	42.5	86.0	.368	18.18	15.62
	1932	26	198	4.9	51.2	38.9	76.0	.338	17.31	13.14
Inspectors, male.....	1930	46	345	5.2	50.1	47.0	93.8	.459	23.00	21.57
	1932	50	337	5.4	50.4	48.0	95.2	.408	20.56	19.60
Inspectors, female.....	1930	28	269	4.8	51.8	41.2	79.5	.295	15.28	12.14
	1932	24	186	5.3	52.2	44.5	85.2	.249	13.00	11.06
Jackmen, printing, male.....	1930	19	70	5.6	51.2	57.5	112.3	.483	24.73	27.75
	1932	18	64	5.0	51.0	56.7	111.2	.395	20.15	22.37
Kettle men, color mixing, male.....	1930	26	58	5.3	51.8	56.3	108.7	.485	25.12	27.29
	1932	22	52	5.1	51.2	50.5	110.4	.424	21.71	23.96
Kettle men's helpers, male.....	1930	10	80	4.8	49.9	49.6	99.4	.475	23.70	23.60
	1932	16	90	4.9	51.3	50.8	99.0	.320	16.42	16.24
Kier boilers, male.....	1930	54	154	5.4	53.0	56.9	107.4	.433	22.95	24.66
	1932	55	132	5.3	53.5	58.4	109.2	.391	20.92	22.83
Knotters, female.....	1930	15	88	4.7	51.0	41.2	80.8	.298	15.20	12.31
	1932	24	118	5.3	51.4	45.4	88.3	.267	13.72	12.12
Mangle tenders, male.....	1930	57	407	5.2	51.2	50.9	99.4	.424	21.71	21.60
	1932	59	470	5.2	51.6	51.5	99.8	.366	18.89	18.86
Mangle tenders, female.....	1930	3	11	5.1	50.4	49.9	99.0	.310	15.62	15.45
	1932	1	5	3.6	49.5	34.6	69.9	.241	11.93	8.35
Measurers, male.....	1930	11	46	4.7	50.8	43.2	85.0	.457	23.22	19.73
	1932	17	67	5.5	53.4	53.1	99.4	.323	17.25	17.14
Measurers, female.....	1930	16	80	5.2	50.5	43.1	85.3	.423	21.36	18.22
	1932	8	35	5.3	50.8	46.9	92.3	.356	18.08	16.69
Mercerizers, male.....	1930	35	118	5.1	52.7	50.2	95.3	.434	22.87	21.79
	1932	32	87	5.4	52.0	56.0	107.7	.430	22.36	24.07
Openers, male.....	1930	43	152	5.1	49.6	47.1	95.0	.487	24.16	22.94
	1932	52	144	5.1	50.1	47.6	95.0	.394	19.74	18.77
Packers, male.....	1930	74	342	5.4	51.8	49.1	94.8	.423	21.91	20.77
	1932	69	255	5.6	52.0	51.4	98.8	.367	19.08	18.86
Pilers, male.....	1930	19	181	4.9	49.4	43.1	87.2	.337	16.65	14.49
	1932	21	135	5.0	51.4	46.5	90.5	.303	15.57	14.10
Plaiters, male.....	1930	35	259	5.0	51.1	46.8	91.6	.374	19.11	17.51
	1932	44	202	5.1	51.8	51.1	98.6	.308	15.95	15.71
Plaiters, female.....	1930	2	9	5.1	50.3	42.2	83.9	.281	14.13	11.88
	1932	1	6	3.8	49.5	34.5	69.7	.240	11.88	8.28
Polishers, metal, male.....	1930	14	47	5.6	50.9	52.9	103.9	.490	24.94	25.91
	1932	10	30	5.5	49.8	48.7	97.8	.425	21.17	20.71
Printing-machine tenders, male.....	1930	28	313	5.4	51.5	54.7	106.2	1.201	61.85	65.66
	1932	26	313	5.3	50.8	55.2	108.7	1.019	51.77	56.23
Roller turners, male.....	1930	10	18	5.6	50.5	51.1	101.2	.570	28.79	29.11
	1932	11	26	5.1	51.7	44.6	86.3	.398	20.58	17.73
Scutcher tenders, male.....	1930	14	40	5.1	50.6	50.9	100.6	.409	20.70	20.81
	1932	8	24	5.2	51.8	54.8	105.8	.304	15.75	16.64

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE DYEING AND FINISHING OF TEXTILES IN 1930 AND 1932, BY OCCUPATIONS—Continued

Occupation and sex	Year	Number of establishments	Number of wage earners	Average days on which employees worked in week	Average full-time hours per week	Hours actually worked in week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in week
						Average number	Per cent of full time			
Sewers, male.....	1930	39	149	5.6	51.2	54.2	105.9	\$0.389	\$19.92	\$21.07
	1932	39	154	5.3	51.0	52.2	102.4	.332	16.93	17.32
Sewers, female.....	1930	56	504	4.8	51.4	41.4	80.5	.312	16.04	12.93
	1932	50	360	5.4	51.4	46.0	89.5	.277	14.24	12.73
Singers, male.....	1930	47	118	4.9	50.7	46.4	91.5	.415	21.04	19.23
	1932	48	127	5.3	51.6	51.1	99.0	.366	18.89	18.71
Soaper tenders, male.....	1930	27	192	5.4	51.2	58.9	115.0	.410	20.99	24.15
	1932	28	198	5.2	51.8	55.0	106.2	.350	18.13	19.23
Soap mixers, male.....	1930	14	34	5.3	51.1	59.0	115.5	.429	21.92	25.26
	1932	13	24	5.5	50.6	57.7	114.0	.403	20.39	23.24
Sprinkler tenders, male.....	1930	21	68	5.4	51.4	52.7	102.5	.379	19.48	20.00
	1932	28	72	5.1	52.4	51.0	97.3	.338	17.71	17.26
Steamer tenders, male.....	1930	15	126	5.1	48.8	52.4	107.4	.438	21.37	22.97
	1932	13	71	4.9	49.4	51.4	104.0	.345	17.04	17.72
Swing tenders, male.....	1930	36	218	5.2	50.6	50.8	100.4	.373	18.87	18.94
	1932	29	160	5.0	52.0	51.4	98.8	.336	17.47	17.30
Swing tenders, female.....	1930	3	26	4.4	49.2	35.5	72.2	.310	15.25	11.00
	1932	3	13	4.8	53.7	40.6	75.6	.275	14.77	11.18
Tenter-frame tenders, male.....	1930	69	925	5.3	51.0	51.2	100.4	.435	22.19	22.26
	1932	69	970	5.3	51.5	53.3	103.5	.385	19.83	20.55
Tenter-frame tenders, female.....	1930	14	122	5.3	50.4	49.9	99.0	.353	17.79	17.62
	1932	9	75	4.9	50.5	43.8	86.7	.319	16.11	13.95
Truckers, male.....	1930	56	800	5.4	50.6	51.5	101.8	.405	20.49	20.86
	1932	62	750	5.3	51.2	51.2	100.0	.344	17.58	17.58
Tub washers, male.....	1930	20	55	5.5	52.9	56.7	107.2	.404	21.37	22.91
	1932	21	34	5.0	50.8	55.3	108.9	.355	18.03	19.62
Washer tenders, male.....	1930	60	931	4.9	51.3	48.3	94.2	.447	22.93	21.59
	1932	65	660	5.2	51.4	51.8	100.8	.378	19.43	19.58
Yarn winders, male.....	1930	9	68	4.0	56.2	35.5	63.2	.250	16.30	10.28
	1932	4	91	3.8	56.3	32.1	57.0	.346	19.48	11.08
Yarn winders, female.....	1930	13	385	4.2	51.9	39.6	76.3	.350	18.17	13.84
	1932	13	344	4.3	53.4	39.3	73.6	.262	13.19	10.29
Other employees, male.....	1930	109	6,621	5.3	51.0	51.1	100.2	.475	24.23	24.30
	1932	91	5,935	5.3	51.3	50.7	98.8	.441	22.62	22.34
Other employees, female.....	1930	73	1,884	5.1	50.1	43.1	86.0	.336	16.83	14.47
	1932	71	1,669	5.3	50.6	44.4	87.7	.298	15.08	13.23
All employees, male.....	1930	109	17,739	5.2	51.0	50.7	99.4	.473	24.12	23.99
	1932	93	16,215	5.2	51.4	51.1	99.4	.418	21.49	21.37
All employees, female.....	1930	84	3,743	5.0	50.5	42.4	84.0	.335	16.92	14.20
	1932	81	3,031	5.2	51.2	43.6	85.2	.290	14.85	12.65
All employees, both sexes.....	1930	109	21,482	5.2	50.9	49.3	96.9	.452	23.01	22.29
	1932	93	19,246	5.2	51.3	49.9	97.3	.400	20.52	19.99

Average Hours and Earnings, by Sex and State, 1930 and 1932

TABLE 2 shows for all of the males, for all of the females, and for all males and females combined, who were included in the studies of dyeing and finishing of textiles in each State in 1930 and 1932, average days on which they worked and average full-time and actual hours and earnings per week, average earnings per hour, and the per cent of full time worked in the week.

In each State the average earnings per hour of males and of females were less in 1932 than in 1930. Those of males ranged in 1930 from 32 cents to 57.2 cents; those of females, from 22.3 cents to 38.6 cents; and those of males and females combined, from 31 cents to 55.4 cents. In 1932 the averages of males ranged from 27.8 cents to 49.7 cents, those of females from 21 cents to 35.2 cents, and those of both sexes combined from 27 cents to 47.2 cents. The average hourly earnings of males for all States were 47.3 cents in 1930 and 41.8 in 1932; those of

females were 33.5 cents in 1930 and 29 cents in 1932; and those of males and females combined were 45.2 cents in 1930 and 40 cents in 1932.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN THE DYEING AND FINISHING OF TEXTILES IN 1930 AND 1932, BY SEX AND STATE

Sex and State	Year	Number of establishments	Number of wage earners	Average days on which employees worked in week	Average full-time hours per week	Hours actually worked in week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in week
						Average number	Per cent of full time			
Males										
Connecticut.....	1930	5	724	5.3	53.5	54.2	101.3	\$0.572	\$30.60	\$30.96
	1932	5	628	5.3	54.5	53.8	98.7	.485	26.43	26.09
Massachusetts.....	1930	9	4,064	5.5	48.9	52.7	107.8	.433	21.17	22.80
	1932	8	3,174	5.3	49.0	52.1	106.3	.379	18.57	19.76
New Jersey.....	1930	16	5,503	5.1	49.8	48.0	96.4	.523	26.05	25.09
	1932	18	5,298	5.3	50.3	49.8	99.0	.476	23.94	23.69
New York.....	1930	9	1,303	5.0	48.9	45.3	92.6	.520	25.43	23.58
	1932	10	1,063	5.1	48.9	45.7	93.5	.417	20.39	19.07
North Carolina.....	1930	43	1,784	4.8	55.0	47.1	85.6	.320	17.60	15.05
	1932	25	1,610	5.0	54.4	48.3	88.8	.296	16.10	14.29
Pennsylvania.....	1930	12	923	5.1	53.3	51.4	96.4	.546	29.10	28.09
	1932	12	865	5.1	52.2	53.4	102.3	.497	25.94	26.56
Rhode Island.....	1930	10	2,568	5.5	52.5	54.9	104.6	.511	26.83	28.03
	1932	10	2,447	5.2	52.9	50.8	96.0	.453	23.96	23.03
South Carolina.....	1930	5	870	5.6	55.0	58.6	106.5	.332	18.26	19.45
	1932	5	1,130	5.6	55.2	61.2	110.9	.278	15.35	17.01
Total.....	1930	109	17,739	5.2	51.0	50.7	99.4	.473	24.12	23.99
	1932	93	16,215	5.2	51.4	51.1	99.4	.418	21.49	21.37
Females										
Connecticut.....	1930	5	85	5.2	53.4	49.7	93.1	.386	20.61	19.20
	1932	3	71	5.3	53.9	49.6	92.0	.349	18.81	17.34
Massachusetts.....	1930	8	813	5.3	48.0	41.3	86.0	.313	15.02	12.90
	1932	7	577	5.7	48.0	43.2	90.0	.286	13.73	12.34
New Jersey.....	1930	16	1,077	5.0	48.6	40.5	83.3	.377	18.32	15.27
	1932	18	741	5.2	48.7	40.6	83.4	.352	17.14	14.28
New York.....	1930	9	218	4.9	48.5	40.6	83.7	.343	16.64	13.93
	1932	9	154	4.5	48.7	38.4	78.9	.285	13.88	10.95
North Carolina.....	1930	20	863	4.5	54.0	42.0	77.8	.288	15.55	12.10
	1932	20	797	4.8	54.5	43.7	80.2	.232	12.64	10.15
Pennsylvania.....	1930	11	230	4.8	51.7	43.8	84.7	.352	18.20	15.42
	1932	9	204	5.0	51.7	44.6	86.3	.338	17.47	15.07
Rhode Island.....	1930	10	359	5.1	52.5	47.2	89.9	.377	19.79	17.78
	1932	10	337	5.2	52.9	44.2	83.6	.316	16.72	13.99
South Carolina.....	1930	5	98	6.1	55.0	54.4	98.9	.223	12.27	12.13
	1932	5	150	5.7	55.0	58.5	106.4	.210	11.55	12.28
Total.....	1930	84	3,743	5.0	50.5	42.4	84.0	.335	16.92	14.20
	1932	81	3,031	5.2	51.2	43.6	85.2	.290	14.85	12.65
Males and females										
Connecticut.....	1930	5	809	5.3	53.4	53.7	100.6	.554	29.58	29.73
	1932	5	699	5.3	54.4	53.3	98.0	.472	25.68	25.20
Massachusetts.....	1930	9	4,877	5.5	48.8	50.8	104.1	.417	20.35	21.15
	1932	8	3,751	5.3	48.9	50.8	103.9	.367	17.95	18.62
New Jersey.....	1930	16	6,580	5.1	49.6	46.8	94.4	.502	24.90	23.48
	1932	18	6,039	5.3	50.1	48.7	97.2	.463	23.20	22.53
New York.....	1930	9	1,521	5.0	48.8	44.7	91.6	.497	24.25	22.20
	1932	10	1,217	5.0	48.9	44.8	91.6	.403	19.71	18.04
North Carolina.....	1930	43	2,647	4.7	54.7	45.4	83.0	.310	16.96	14.09
	1932	25	2,407	4.9	54.4	46.8	86.0	.276	15.01	12.92
Pennsylvania.....	1930	12	1,153	5.0	53.0	49.9	94.2	.512	27.14	25.56
	1932	12	1,069	5.1	52.1	51.7	99.2	.471	24.54	24.37
Rhode Island.....	1930	10	2,927	5.4	52.5	53.9	102.7	.497	26.09	26.78
	1932	10	2,784	5.2	52.9	50.0	94.5	.439	23.22	21.94
South Carolina.....	1930	5	968	5.6	55.0	58.2	105.8	.321	17.66	18.71
	1932	5	1,280	5.6	55.1	60.9	110.5	.270	14.88	16.45
Total.....	1930	109	21,482	5.2	50.9	49.3	96.9	.452	23.01	22.29
	1932	93	19,246	5.2	51.3	49.9	97.3	.400	20.52	19.99

Average Hours and Earnings in Selected Occupations, 1932

TABLE 3 presents for the wage earners covered in each State in 1932, in each of 12 representative occupations in the dyeing and finishing of textiles, average days worked and average full-time and actual hours and earnings in one week, average earnings per hour, and the per cent of full time worked in the week. The figures for these occupations illustrate the variations in hours and earnings of wage earners in all occupations in dyeing and finishing in the different States included in the report.

Average days on which calender tenders, the first occupation in the table, worked in one week ranged, by States, from 4.6 to 5.5, and the average for all States was 5.1. Average full-time hours per week ranged from 49 to 55.6, the average for all States being 52.1. Average actual hours worked in one week ranged from 41.9 to 57.8, and the average for all States was 49.8. Average earnings per hour ranged from 27.4 cents to 45.7 cents, with the average for all States, 38.3 cents. Average full-time earnings per week ranged from \$15.23 to \$24.63, the average for all States being \$19.95. Average actual earnings in one week ranged from \$14.45 to \$23.49, with a general average for all States of \$19.06. Wage earners in four States averaged more than full time and in four States less than full time, while in all States the per cent of full time worked was 95.6.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 12 SPECIFIED OCCUPATIONS IN DYEING AND FINISHING OF TEXTILES IN 1932, BY SEX AND STATE

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which employees worked in week	Average full-time hours per week	Hours actually worked in week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in week
					Average number	Per cent of full time			
Calender tenders, male:									
Connecticut.....	3	45	4.7	53.9	44.8	83.1	\$0.457	\$24.63	\$20.48
Massachusetts.....	8	111	5.1	49.8	52.9	106.2	.339	16.88	17.91
New Jersey.....	17	76	5.3	51.7	53.1	102.7	.442	22.85	23.49
New York.....	10	62	4.6	49.0	41.9	85.5	.414	20.29	17.35
North Carolina.....	11	35	5.5	54.0	50.9	94.3	.284	15.34	14.45
Pennsylvania.....	8	20	5.3	53.3	55.1	103.4	.425	22.65	23.43
Rhode Island.....	10	104	4.8	53.0	45.2	85.3	.439	23.27	19.84
South Carolina.....	5	54	5.5	55.6	57.8	104.0	.274	15.23	15.83
Total.....	72	507	5.1	52.1	49.8	95.6	.383	19.95	19.06
Dryer tenders, male:									
Connecticut.....	5	15	5.5	53.7	61.0	113.6	.392	21.05	23.88
Massachusetts.....	8	100	5.4	50.0	54.9	109.8	.332	16.60	18.23
New Jersey.....	18	221	5.3	51.0	54.1	106.1	.432	22.03	23.36
New York.....	8	57	5.0	48.7	51.4	105.5	.383	18.65	19.69
North Carolina.....	16	47	5.1	54.3	51.5	94.8	.258	14.01	13.29
Pennsylvania.....	12	38	5.1	53.0	48.7	91.9	.446	23.64	21.72
Rhode Island.....	10	102	5.2	52.3	51.7	98.9	.380	19.87	19.65
South Carolina.....	4	47	5.3	55.3	59.7	108.0	.241	13.33	14.42
Total.....	81	627	5.2	51.6	53.6	103.9	.375	19.35	20.09
Dryer tenders, female:									
New Jersey.....	1	13	3.8	48.0	29.5	61.5	.285	13.68	8.39
New York.....	1	3	4.0	49.5	40.0	80.8	.223	11.04	8.93
Total.....	2	16	3.8	48.3	31.4	65.0	.270	13.04	8.50

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 12 SPECIFIED OCCUPATIONS IN DYEING AND FINISHING OF TEXTILES IN 1932, BY SEX AND STATE—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which employees worked in week	Average full-time hours per week	Hours actually worked in week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in week
					Average number	Per cent of full time			
Dyeing machine tenders, male:									
Connecticut	3	38	5.2	53.8	53.3	99.1	\$0.418	\$22.49	\$22.29
Massachusetts	7	132	4.9	49.1	50.1	102.0	.331	16.25	16.55
New Jersey	18	658	5.2	50.1	51.5	102.8	.439	21.99	22.61
New York	9	71	6.4	48.7	51.5	105.7	.387	18.85	19.94
North Carolina	18	94	4.7	53.2	48.8	91.7	.266	14.15	12.95
Pennsylvania	12	181	4.7	52.0	44.5	85.6	.496	25.79	22.09
Rhode Island	10	175	4.8	51.5	45.5	88.3	.443	22.81	20.15
South Carolina	3	44	5.2	55.0	55.5	100.9	.266	14.63	14.78
Total	80	1,393	5.1	50.8	49.7	97.8	.415	21.08	20.61
Folders, male:									
Connecticut	3	11	5.6	54.1	57.3	105.9	.576	31.16	33.00
Massachusetts	8	90	5.1	49.0	45.3	92.4	.477	23.37	21.61
New Jersey	7	50	5.5	51.6	56.4	109.3	.613	31.63	34.57
New York	6	35	4.8	48.5	38.7	79.8	.533	25.58	20.62
North Carolina	13	57	5.3	53.9	48.8	90.5	.320	17.25	15.61
Pennsylvania	8	24	5.3	50.6	47.6	94.1	.436	22.06	20.77
Rhode Island	10	99	5.2	52.8	48.3	91.5	.588	31.05	28.40
South Carolina	4	39	5.8	55.0	59.8	108.7	.408	22.44	24.42
Total	59	405	5.3	51.7	49.2	95.2	.498	25.75	24.47
Folders, female:									
Massachusetts	3	39	5.8	48.0	38.5	80.2	.541	25.97	20.86
New Jersey	10	54	5.1	48.1	35.2	73.2	.418	20.11	14.72
New York	1	2	3.0	48.0	25.4	52.9	.449	21.55	11.41
North Carolina	5	66	4.4	54.8	39.9	72.8	.190	10.41	7.60
Rhode Island	5	27	4.6	51.7	39.9	77.2	.356	18.41	14.20
South Carolina	2	10	5.4	55.0	52.6	95.6	.164	9.02	8.64
Total	26	198	4.9	51.2	38.9	76.0	.338	17.31	13.14
Inspectors, male:									
Connecticut	1	3	5.3	55.0	50.2	91.3	.429	23.60	21.52
Massachusetts	4	50	5.4	48.0	48.8	101.7	.322	15.46	15.69
New Jersey	11	158	5.3	49.1	47.6	96.9	.457	22.44	21.77
New York	5	24	5.3	49.6	44.1	88.9	.390	19.34	17.19
North Carolina	11	34	5.2	53.8	46.3	86.1	.269	14.47	12.42
Pennsylvania	8	27	5.6	52.9	52.6	99.4	.448	23.70	23.57
Rhode Island	6	29	5.2	53.4	44.4	83.1	.509	27.18	22.60
South Carolina	4	12	5.9	55.0	60.2	109.5	.261	14.36	15.69
Total	50	337	5.4	50.4	48.0	95.2	.408	20.56	19.60
Inspectors, female:									
Connecticut	1	1	3.0	55.0	29.0	52.7	.350	19.25	10.15
Massachusetts	3	23	5.8	48.0	41.6	86.7	.238	11.42	9.91
New Jersey	6	39	5.2	48.2	38.0	78.8	.336	16.20	12.78
New York	1	12	5.0	48.0	39.8	82.9	.301	14.45	11.96
North Carolina	8	88	5.3	55.2	47.2	85.5	.213	11.76	10.08
Pennsylvania	2	5	5.8	52.8	52.6	99.6	.349	18.43	18.32
Rhode Island	2	11	5.6	51.0	51.0	94.4	.256	13.82	13.08
South Carolina	1	7	5.0	55.0	50.0	90.9	.155	8.53	7.76
Total	24	186	5.3	52.2	44.5	85.2	.249	13.00	11.06
Mangle tenders, male:									
Connecticut	2	15	5.0	52.7	49.6	94.1	.448	23.61	22.21
Massachusetts	5	43	5.0	49.0	49.3	100.6	.320	15.68	15.79
New Jersey	12	131	5.6	51.4	52.3	101.8	.428	22.00	22.37
New York	8	69	4.6	48.6	41.7	85.8	.390	18.95	16.26
North Carolina	11	49	5.5	54.4	54.9	100.9	.273	14.85	14.95
Pennsylvania	8	15	5.1	52.4	49.1	93.7	.429	22.48	21.02
Rhode Island	9	93	5.3	51.4	52.7	102.5	.392	20.15	20.67
South Carolina	4	55	5.2	55.2	59.4	107.6	.254	14.02	15.08
Total	59	470	5.2	51.6	51.5	99.8	.366	18.89	18.86
Printing-machine tenders, male:									
Connecticut	3	24	5.0	55.4	52.5	94.8	.975	54.02	51.21
Massachusetts	6	92	5.4	49.1	57.0	116.1	1.063	52.19	60.59
New Jersey	6	74	5.9	48.9	50.0	102.2	1.070	52.32	53.45
New York	1	4	5.0	47.5	50.5	106.3	1.309	62.18	66.05
North Carolina	2	14	5.3	50.4	52.5	104.2	.330	16.63	17.31
Pennsylvania	1	17	5.1	48.8	69.2	141.8	1.475	71.98	102.00
Rhode Island	6	65	5.0	52.9	54.5	103.0	1.132	59.88	61.71
South Carolina	1	23	5.0	55.0	61.5	111.8	.417	22.94	25.62
Total	26	313	5.3	50.8	55.2	108.7	1.019	51.77	56.23

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 12 SPECIFIED OCCUPATIONS IN DYEING AND FINISHING OF TEXTILES IN 1932, BY SEX AND STATE—Continued

Occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which employees worked in week	Average full-time hours per week	Hours actually worked in week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in week
					Average number	Per cent of full time			
Sewers, male:									
Connecticut.....	3	5	5.0	55.0	48.0	87.3	\$0.396	\$21.78	\$19.00
Massachusetts.....	5	64	5.2	48.2	51.0	105.8	.285	13.74	14.51
New Jersey.....	8	26	5.3	52.3	52.8	101.0	.436	22.80	23.02
New York.....	3	5	5.2	49.3	45.4	92.1	.444	21.89	20.15
North Carolina.....	8	16	5.2	53.8	49.2	91.4	.231	12.43	11.36
Pennsylvania.....	4	8	5.4	51.9	58.4	112.5	.387	20.09	22.60
Rhode Island.....	7	28	5.5	53.6	56.4	105.2	.355	19.03	20.02
South Carolina.....	1	2	5.5	55.0	56.0	101.8	.189	10.40	10.59
Total.....	39	154	5.3	51.0	52.2	102.4	.332	16.93	17.32
Sewers, female:									
Connecticut.....	2	12	4.3	52.9	40.9	77.3	.309	16.35	12.64
Massachusetts.....	6	70	5.4	47.8	39.3	82.2	.244	11.66	9.59
New Jersey.....	13	76	5.4	48.5	42.8	88.2	.330	16.01	14.13
New York.....	6	13	4.5	48.2	36.9	76.6	.330	15.91	12.21
North Carolina.....	7	129	5.8	54.8	52.6	96.0	.252	13.81	13.28
Pennsylvania.....	5	10	5.5	51.5	49.5	96.1	.335	17.25	16.60
Rhode Island.....	8	30	4.8	51.2	40.5	79.1	.336	17.20	13.58
South Carolina.....	3	20	5.4	55.0	54.4	98.9	.222	12.21	12.06
Total.....	50	360	5.4	51.4	46.0	89.5	.277	14.24	12.73
Tenter frame tenders, male:									
Connecticut.....	4	22	5.6	54.5	65.9	120.9	.452	24.63	29.78
Massachusetts.....	7	146	5.2	50.0	55.2	110.4	.320	16.00	17.65
New Jersey.....	17	452	5.5	50.8	51.9	102.2	.430	21.84	22.33
New York.....	10	69	5.1	49.1	50.5	102.9	.378	18.56	19.10
North Carolina.....	10	54	4.9	53.0	47.0	88.7	.271	14.36	12.73
Pennsylvania.....	7	38	5.4	53.3	58.9	110.5	.428	22.81	25.23
Rhode Island.....	10	123	5.1	53.4	50.9	95.3	.405	21.63	20.63
South Carolina.....	4	66	5.6	55.8	64.5	115.6	.261	14.56	16.80
Total.....	69	970	5.3	51.5	53.3	103.5	.385	19.83	20.55
Tenter frame tenders, female:									
Connecticut.....	1	5	5.8	55.0	53.2	96.7	.438	24.09	23.30
New Jersey.....	3	32	5.3	48.6	47.1	96.9	.327	15.89	15.41
New York.....	1	13	3.3	49.5	31.0	62.6	.240	11.88	7.44
Pennsylvania.....	2	11	4.7	53.9	41.4	76.8	.314	16.92	13.00
Rhode Island.....	2	14	5.1	51.4	46.6	90.7	.302	15.52	14.09
Total.....	9	75	4.9	50.5	43.8	86.7	.319	16.11	13.95
Truckers, male:									
Connecticut.....	2	29	5.4	54.3	50.7	93.4	.430	23.35	21.82
Massachusetts.....	7	188	5.3	48.8	51.9	106.4	.314	15.32	16.32
New Jersey.....	13	199	5.4	49.6	49.0	98.8	.429	21.28	21.00
New York.....	8	51	5.4	48.8	47.3	96.9	.370	18.06	17.52
North Carolina.....	11	82	5.2	54.3	48.5	89.3	.236	12.81	11.43
Pennsylvania.....	8	41	5.1	53.4	56.9	106.6	.373	19.92	21.20
Rhode Island.....	9	91	5.0	53.5	49.6	92.7	.361	19.31	17.88
South Carolina.....	4	69	5.7	55.0	60.5	110.0	.235	12.93	14.24
Total.....	62	750	5.3	51.2	51.2	100.0	.344	17.58	17.58
Washer tenders, male:									
Connecticut.....	3	29	5.2	53.4	51.4	96.3	.428	22.86	22.02
Massachusetts.....	6	85	5.2	48.2	53.0	110.0	.309	14.89	16.37
New Jersey.....	15	295	5.1	51.1	51.2	100.2	.437	22.33	22.35
New York.....	8	41	5.0	48.9	45.3	92.6	.372	18.19	16.83
North Carolina.....	11	36	5.0	54.2	50.7	93.5	.248	13.44	12.56
Pennsylvania.....	7	22	5.2	52.1	54.3	104.2	.458	23.86	24.89
Rhode Island.....	10	98	5.4	52.1	50.2	96.4	.369	19.22	18.52
South Carolina.....	5	54	5.4	55.2	61.1	110.7	.240	13.25	14.67
Total.....	65	660	5.2	51.4	51.8	100.8	.378	19.43	19.58
Yarn winders, male:									
North Carolina.....	4	91	3.8	56.3	32.1	57.0	.346	19.48	11.08
Yarn winders, female:									
New Jersey.....	1	8	3.9	48.0	31.6	65.8	.245	11.76	7.73
North Carolina.....	8	270	4.2	53.8	39.4	73.2	.250	13.45	9.85
Pennsylvania.....	4	66	4.8	52.6	40.1	76.2	.309	16.25	12.41
Total.....	13	344	4.3	53.4	39.3	73.6	.262	13.99	10.29

Wage-rate Changes in American Industries

Manufacturing Industries

DATA concerning wage-rate changes occurring between May 15 and June 15 in 89 manufacturing industries included in the monthly employment survey of the Bureau of Labor Statistics are presented in the following table.

Of the 18,492 manufacturing establishments furnishing employment data in June, 17,531 establishments, or 94.8 per cent of the total, reported no change in wage rates during the month ending June 15, 1932. The employees whose wage rates were reported unchanged over the month interval totaled 2,372,062, comprising 91.8 per cent of the total number of employees included in this survey of manufacturing industries.

Decreases in rates of wages were reported by 961 establishments, or 5.2 per cent of the total number of establishments reporting. These decreases, averaging 12.7 per cent, affected 213,046 employees, or 8.1 per cent of all employees in the establishments reporting.

No wage increases were reported.

TABLE 1.—WAGE CHANGES IN MANUFACTURING INDUSTRIES DURING MONTH ENDING JUNE 15, 1932

Industry	Estab- lish- ments report- ing	Total number of employees	Number of es- tablishments reporting—		Number of em- ployees having—	
			No wage changes	Wage de- crease	No wage changes	Wage de- creases
All manufacturing industries.....	18, 492	2, 585, 108	17, 531	961	2, 372, 062	213, 046
Per cent of total.....	100. 0	100. 0	94. 8	5. 2	91. 8	8. 2
Slaughtering and meat packing.....	226	82, 955	215	11	74, 845	8, 110
Confectionery.....	337	28, 065	328	9	26, 759	1, 306
Ice cream.....	396	14, 791	377	19	13, 561	1, 230
Flour.....	437	16, 043	427	10	15, 801	242
Baking.....	947	63, 724	907	40	61, 172	2, 552
Sugar refining, cane.....	16	7, 935	16		7, 935	
Beet sugar.....	48	3, 102	47	1	3, 065	37
Beverages.....	360	11, 737	354	6	11, 490	247
Butter.....	314	6, 359	295	19	5, 932	427
Cotton goods.....	683	172, 504	619	64	148, 389	24, 115
Hosiery and knit goods.....	468	95, 386	438	30	89, 209	6, 177
Silk goods.....	258	30, 522	247	11	28, 643	1, 879
Woolen and worsted goods.....	261	38, 763	228	33	32, 824	5, 939
Carpets and rugs.....	32	10, 452	29	3	9, 907	545
Dyeing and finishing textiles.....	152	31, 252	138	14	28, 956	2, 296
Clothing, men's.....	373	48, 505	364	9	45, 995	2, 510
Shirts and collars.....	112	13, 407	108	4	13, 172	235
Clothing, women's.....	382	24, 032	380	2	23, 849	183
Millinery.....	136	7, 141	132	4	7, 045	96
Corsets and allied garments.....	30	5, 512	28	2	5, 363	149
Cotton small wares.....	112	8, 603	105	7	8, 442	161
Hats, fur-felt.....	39	4, 534	39		4, 534	
Men's furnishings.....	74	5, 160	73	1	5, 020	140
Iron and steel.....	221	184, 856	135	86	100, 623	84, 233
Cast-iron pipe.....	40	5, 976	40		5, 976	
Structural and ornamental ironwork.....	191	16, 626	173	18	12, 562	4, 064
Hardware.....	111	22, 572	104	7	21, 764	808
Steam fittings, and steam and hot-water heating apparatus.....	109	15, 729	101	8	13, 928	1, 801
Stoves.....	161	14, 394	158	3	14, 165	229
Bolts, nuts, washers and rivets.....	65	8, 499	57	8	7, 093	1, 406
Cutlery (not including silver and plated cutlery) and edge tools.....	336	9, 703	326	10	7, 985	1, 718
Forgings, iron and steel.....	63	5, 581	58	5	4, 469	1, 112
Plumbers' supplies.....	66	4, 716	63	3	4, 483	233
Tin cans and other tinware.....	57	7, 922	54	3	7, 814	108
Tools (not including edge tools, machine tools, files or saws).....	137	7, 218	132	5	6, 668	550

TABLE 1.—WAGE CHANGES IN MANUFACTURING INDUSTRIES DURING MONTH ENDING JUNE 15, 1932—Continued

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—		Number of employees having—	
			No wage changes	Wage decrease	No wage changes	Wage decreases
Wirework.....	72	5,339	62	10	3,373	1,966
Lumber, sawmills.....	652	60,071	613	39	54,536	5,535
Lumber, millwork.....	469	19,245	438	31	18,308	937
Furniture.....	487	39,463	461	26	37,769	1,694
Turpentine and rosin.....	22	1,066	22		1,066	
Leather.....	164	22,596	151	13	19,781	2,815
Boots and shoes.....	335	97,926	327	8	96,215	1,711
Paper and pulp.....	419	77,638	378	41	69,920	7,718
Paper boxes.....	313	20,113	305	8	19,401	712
Printing, book and job.....	755	51,391	716	39	49,238	2,153
Printing, newspapers and periodicals.....	451	66,430	433	18	63,217	3,213
Chemicals.....	125	20,377	119	6	17,485	2,892
Fertilizers.....	206	4,536	196	10	4,434	102
Petroleum refining.....	114	44,784	114		44,784	
Cottonseed oil, cake, and meal.....	48	1,259	47	1	1,255	4
Druggists' preparations.....	37	5,898	36	1	5,600	298
Explosives.....	21	2,728	21		2,728	
Paints and varnishes.....	359	15,479	344	15	15,162	317
Rayon.....	21	17,729	20	1	17,403	326
Soap.....	86	12,406	86		12,406	
Cement.....	123	13,690	114	9	11,722	1,968
Brick, tile, and terra cotta.....	703	20,512	662	41	17,801	2,711
Pottery.....	121	14,019	120	1	13,966	53
Glass.....	192	33,727	184	8	32,759	968
Marble, granite, slate, and other stone products.....	228	4,408	211	17	3,959	449
Stamped and enameled ware.....	91	13,158	87	4	12,716	442
Brass, bronze, and copper products.....	202	27,315	196	6	27,175	140
Aluminum manufactures.....	28	4,819	26	2	3,525	1,294
Clocks, time-recording devices, and clock movements.....	24	4,679	20	4	4,479	200
Gas and electric fixtures, lamps, lanterns, and reflectors.....	59	5,060	56	3	4,999	61
Plated ware.....	54	7,287	54		7,287	
Smelting and refining copper, lead, and zinc.....	27	7,842	24	3	7,386	456
Jewelry.....	153	7,284	149	4	7,131	153
Chewing and smoking tobacco and snuff.....	37	10,318	37		10,318	
Cigars and cigarettes.....	222	46,720	221	1	46,678	42
Automobiles.....	242	221,188	231	11	219,680	1,508
Aircraft.....	35	6,646	33	2	6,634	12
Cars, electric and steam railroad.....	34	4,457	34		4,457	
Locomotives.....	14	3,006	14		3,006	
Shipbuilding.....	97	31,760	92	5	31,609	151
Rubber tires and inner tubes.....	39	45,381	39		45,381	
Rubber boots and shoes.....	10	10,650	10		10,650	
Rubber goods other than boots, shoes, tires, and inner tubes.....	103	18,468	102	1	18,419	49
Agricultural implements.....	73	4,445	72	1	4,432	13
Electrical machinery, apparatus, and supplies.....	303	127,851	293	10	125,229	2,622
Engines, turbines, tractors, and water wheels.....	80	15,048	79	1	14,949	99
Cash registers, adding machines, and calculating machines.....	45	14,918	43	2	14,267	651
Foundry and machine-shop products.....	1,090	105,564	1,021	69	100,558	5,006
Machine tools.....	153	11,639	149	4	11,359	280
Textile machinery and parts.....	33	5,606	32	1	4,556	1,050
Typewriters and supplies.....	18	9,017	16	2	5,006	4,011
Radio.....	42	16,230	38	4	15,274	956
Electric-railroad repair shops.....	392	20,912	372	20	20,542	370
Steam-railroad repair shops.....	519	70,734	516	3	70,634	100

Nonmanufacturing Industries

IN THE following table are presented data concerning wage-rate changes occurring between May 15 and June 15, 1932, reported by 14 nonmanufacturing groups included in the bureau's monthly employment survey.

Decreases in wage rates were reported by establishments in each of the 14 groups, with the exception of anthracite mining in which

no change in wage rates was shown. The lowest average per cent of decrease in wage rates, 6.0, was reported in the crude petroleum group, while the highest average per cent, 18.1, was reported in the canning and preserving group. The average per cent of decrease in the remaining groups ranged from 8.6 in the telephone and telegraph group to 15.1 in metalliferous mining.

No wage increases were reported.

TABLE 2.—WAGE CHANGES IN NONMANUFACTURING INDUSTRIES DURING MONTH ENDING JUNE 15, 1932

Industrial groups	Estab- lish- ments report- ing	Total number of em- ployees	Number of es- tablishments reporting—		Number of em- ployees having—	
			No wage changes	Wage de- creases	No wage changes	Wage de- creases
Anthracite mining.....	160	72,455	160	-----	72,455	-----
Per cent of total.....	100.0	100.0	100.0	-----	100.0	-----
Bituminous coal mining.....	1,142	149,592	1,104	38	142,340	7,252
Per cent of total.....	100.0	100.0	96.7	3.3	95.2	4.8
Metalliferous mining.....	247	19,630	233	14	18,869	761
Per cent of total.....	100.0	100.0	94.3	5.7	96.1	3.9
Quarrying and nonmetallic mining.....	634	23,556	610	24	22,257	1,299
Per cent of total.....	100.0	100.0	96.2	3.8	94.5	5.5
Crude petroleum producing.....	278	21,475	276	2	21,438	37
Per cent of total.....	100.0	100.0	99.3	0.7	99.8	0.2
Telephone and telegraph.....	8,011	282,548	7,977	34	281,626	922
Per cent of total.....	100.0	100.0	99.6	0.4	99.7	0.3
Power and light.....	3,470	221,553	3,461	9	220,426	1,127
Per cent of total.....	100.0	100.0	99.7	0.3	99.5	0.5
Electric railroad and motor bus operation and main- tenance.....	503	131,195	487	16	129,784	1,411
Per cent of total.....	100.0	100.0	96.8	3.2	98.9	1.1
Wholesale trade.....	2,756	71,071	2,679	77	69,992	1,079
Per cent of total.....	100.0	100.0	97.2	2.8	98.5	1.5
Retail trade.....	13,311	336,695	13,173	138	334,225	2,470
Per cent of total.....	100.0	100.0	99.0	1.0	99.3	0.7
Hotels.....	2,428	135,574	2,370	58	130,775	4,799
Per cent of total.....	100.0	100.0	97.6	2.4	96.5	3.5
Canning and preserving.....	857	41,070	839	18	40,066	1,004
Per cent of total.....	100.0	100.0	97.9	2.1	97.6	2.4
Laundries.....	985	60,563	962	23	59,241	1,322
Per cent of total.....	100.0	100.0	97.7	2.3	97.8	2.2
Dyeing and cleaning.....	392	12,308	385	7	11,823	485
Per cent of total.....	100.0	100.0	98.2	1.8	96.1	3.9

Wage Changes Reported by Trade-Unions Since April, 1932

CHANGES in the wages and hours of trade-unionists and municipal employees, reported to the Bureau of Labor Statistics during the past month and covering the past four months, are shown in the following table. The number of workers covered by the tabulation is 29,695, of whom 972 were reported to have gone on the 5-day week. In addition to those tabulated, barbers, Boston, Mass.; painters, Dayton, Ohio; retail clerks, Seattle, Wash.; and taxicab drivers, Portland, Oreg., reported renewals of old wage agreements.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, APRIL TO JULY, 1932

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Bakers:					
Coney Island, N. Y.—		<i>Per week</i>	<i>Per week</i>		
Oven workers or mixers.....	Apr. 15	\$52.00	\$49.00	48	48
Bench men.....	do	48.00	45.00	48	48
Helpers.....	do	40.00	36.00	48	48
Missoula, Mont.....	May 1	(1)	(2)	48	48
New Orleans, La.—					
Foremen.....	May 7	41.00	36.90	48	48
		37.00	33.30	48	48
		33.00	29.70	48	48
Mixers.....	do	31.00	27.90	48	48
Oven men.....	do	31.00	27.90	48	48
Barbers, Port Angeles, Wash.....	May 15	27.00	20.00	56	56
Brewery and soft-drink workers:					
Denver, Colo.....	May 1	27.00-30.00	24.00-26.00	8-9	8-9
San Francisco, Calif.....	May 15	42.00	40.00	8	8
Building trades workers:					
Bricklayers—					
Fresno, Calif., and vicinity.....	Apr. 1	<i>Per hour</i> 1.50	<i>Per hour</i> 1.25	40	40
Kingston, N. Y.....	May 11	1.65	1.50	40	40
North Adams, Mass., and vicinity, bricklayers and masons.....	June 1	1.50	1.25	40	40
St. Louis, Mo., mosaic and terrazzo workers.....	May —	1.37½	1.25	44	44
San Francisco, Calif., and vicinity, marble setters.....	June 15	1.25	1.00	40	40
Texarkana, Ark.—Tex.....	May 8	1.37½	1.25	44	44
Wingdale, N. Y.....	May 13	1.65	1.37½	8	8
Carpenters—					
Hazleton, Pa., and vicinity.....	Apr. 1	1.12½	1.00	44	44
Houston, Tex.....	May 16	1.00	1.00	44	40
Pile drivers.....	do	1.00	1.00	44	40
Indianapolis, Ind.....	July 1	1.00	1.05	44½	44½
Electrical workers—					
Fresno, Calif.....	Apr. 18	1.25	1.00	40	40
Rochester, N. Y., and vicinity.....	May 1	1.44¾	1.15½	40	40
Hod carriers and laborers—					
Anaconda, Mont., cement workers.....	Apr. 28	1.12½	.87½	44	44
Boston, Mass., and vicinity.....	May —	1.00	.90	48	48
Brockton, Mass.....	May 1	.92½	.75	44	40
Holyoke, Mass., and vicinity.....	May 11	.95	.80	44	40
House wreckers, New York.....	Apr. 1	1.25-1.35	.65-.75	40	40
Painters—					
Bergen County, N. J.....	Apr. 18	1.50	1.25	40	40
Boston, Mass.....	May 1	1.37½	1.12½	40	40
Brockton, Mass.....	Apr. 1	1.10	1.00	40	40
Brookline, Mass.....	May 1	1.37½	1.12½	40	40
Davenport, Iowa.....	Apr. 1	1.15	1.00	40	40
Indianapolis, Ind.....	July 1	1.25	1.06½	40	40
New York, N. Y., sign writers.....					
	May 2	<i>Per day</i> 14.70	<i>Per day</i> 13.20	40	40
Passaic County, N. J.....					
	Apr. 18	<i>Per hour</i> 1.50	<i>Per hour</i> 1.25	40	40
Pittsburgh, Pa., and vicinity.....	May 28	1.25	1.18¾	40	40
Schenectady, N. Y.....	May 1	1.37½	1.00	40	40
Plasterers, North Adams, Mass., and vicinity.....					
	June 1	1.50	1.25	40	40
Plumbers—					
Gloucester, Mass.....	Apr. 8	1.25	1.05	44	44
Montclair, N. J., and vicinity.....	May 19	1.50	1.31¼	40	40
Orange, N. J.....	May 16	1.65	1.40	40	40
Rochester, N. Y.....	Apr. 26	1.50	1.17½	40	40
Seattle, Wash.....	May 1	1.37½	1.10	40	40
Tacoma, Wash.....	do	1.25	1.10	40	40
Roofers—					
Albany, N. Y.....	do	1.43¾	1.25	40	40
Schenectady, N. Y.....	do	1.43¾	1.25	40	40
Troy, N. Y.....	do	1.43¾	1.25	40	40
Sheet-metal workers, Fresno, Calif., and vicinity.....					
	Apr. 15	1.25	1.06¼	40	40
Steamfitters—					
Gloucester, Mass.....	Apr. 1	1.25	1.05	44	44
Pittsburgh, Pa.....	May 13	1.72	1.50	40	40
Tacoma, Wash.....	May 1	1.25	1.10	40	40

1 Not reported.

2 10 per cent reduction.

3 Hours per day.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, APRIL TO JULY, 1932—Continued

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Building trades workers—Continued.		<i>Per hour</i>	<i>Per hour</i>		
Stonecutters, Boston, Mass.-----	Apr. 1	\$1. 37½	\$1. 17½	44	40
Structural-iron workers—					
Allentown, Pa.-----	May 1	1. 50	1. 12½	44	44
Easton, Pa.-----	do.	1. 50	1. 12½	44	44
Chauffeurs and teamsters:					
Boston, Mass., milk-wagon drivers.-----	do.	(4)	(2)	63	63
Lombard, Ill.—					
Ice-wagon drivers—		<i>Per week</i>	<i>Per week</i>		
Peddlers-----	do.	43. 00	44. 00	48	48
Helpers-----	do.	40. 00	41. 00	48	48
Truck drivers (team)-----	do.	41. 00	42. 00	48	48
Truck drivers (auto)-----	do.	44. 00	45. 00	48	48
Material and coal teamsters—					
Single-horse drivers-----	do.	39. 00	35. 10	54	54
Double wagons-----	do.	41. 00	36. 90	54	54
Helpers-----	do.	39. 00	35. 10	54	54
Barn men-----	do.	39. 00	35. 10	54	54
Chauffeurs of trucks of—					
Less than 1 ton-----	do.	40. 50	36. 45	54	54
2 and under 3 tons-----	do.	41. 00	36. 90	54	54
3 and under 5 tons-----	do.	43. 00	38. 70	54	54
Up to 3 tons with trailer-----	do.	42. 00	37. 80	54	54
3 tons or over with trailer-----	do.	45. 00	40. 50	54	54
Helpers-----	do.	39. 00	35. 10	54	54
Yardmen-----	do.	36. 00	32. 40	54	54
Paving teamsters—		<i>Per day</i>	<i>Per day</i>		
Tractor drivers-----	do.	9. 50	8. 55	48	48
Plow men-----	do.	9. 50	8. 55	48	48
Blade men-----	do.	9. 50	8. 55	48	48
Truck drivers-----	do.	8. 00	7. 20	48	48
Teamsters-----	do.	8. 00	7. 20	48	48
Hoppers and dump men-----	do.	7. 20	6. 48	48	48
Slip holders-----	do.	7. 20	6. 48	48	48
Helpers-----	do.	7. 20	6. 48	48	48
St. Louis, Mo., bakery salesmen-drivers.-----	May 18	<i>Per week</i>	<i>Per week</i>		
		\$ 38. 00	\$ 37. 00	(1)	(1)
Westchester County, N. Y., truck drivers.-----	May 4	<i>Per hour</i>	<i>Per hour</i>		
		. 82	. 65	(1)	(1)
Clothing workers:					
Brockton, Mass.—		<i>Per week</i>	<i>Per week</i>		
Boot and shoe workers-----	Apr. 29	30. 50	27. 45	48	48
Tailors-----	Apr. 1	40. 00	35. 00	44	44
Bushelmen-----	do.	36. 00	32. 40	(1)	(1)
Gloversville, N. Y., glove workers-----	June 1	(7)	(8)	59	59
Richmond, Va., tailors-----	Apr. 14	48. 00	43. 00	48	48
San Francisco, Calif., hat workers-----	June 17	44. 00	39. 60	44	44
Coopers, East Liverpool, Ohio-----	Apr. 1	(7)	(9)	48	(1)
Dredge and tug men, Great Lakes district:					
Dredge engineers, operators, and cranimen—		<i>Per month</i>	<i>Per month</i>		
Dipper and hydraulic-dredge engineers-----	do.	277. 50	242. 50	56	56
Cranemen-----	do.	225. 00	190. 00	56	56
Assistant engineers-----	do.	235. 00	200. 50	56	56
Dredge crew—					
Firemen-----	do.	193. 50	158. 50	56	56
Oilers-----	do.	193. 50	158. 50	56	56
Watchmen-----	do.	193. 50	158. 50	56	56
Deck hands-----	do.	182. 00	147. 00	56	56
Scow men-----	do.	182. 00	147. 00	56	56
{-----		185. 00	150. 00	56	56
Tug captains and engineers—					
Captains-----	do.	292. 50	257. 50	56	56
{-----		272. 50	237. 50	56	56
{-----		250. 00	215. 00	56	56
{-----		250. 00	215. 00	56	56
{-----		240. 00	205. 00	56	56
Motor boats (100 horsepower)—					
Captains-----	do.	272. 50	237. 50	56	56
{-----		250. 00	215. 00	56	56
{-----		250. 00	215. 00	56	56
{-----		240. 00	205. 00	56	56

1 Not reported.

2 10 per cent reduction.

4 Various.

5 And 5 per cent on sales over \$200 per week.

6 And 5 per cent on sales over \$225 per week.

7 Piecework.

8 10 to 15 per cent reduction.

9 15 per cent reduction.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, APRIL TO JULY, 1932—Continued

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Dredge and tug men—Continued.		<i>Per month</i>	<i>Per month</i>		
Motor boats (65 to 99 horsepower), captains and engineers.....	Apr. 1	\$227. 50	\$192. 50	56	56
		210. 00	175. 00	56	56
Tug firemen and linemen, tug men and deck hands.....	do	197. 50	162. 50	56	56
		192. 50	157. 50	56	56
		187. 50	152. 50	56	56
Food workers:					
Butchers—		<i>Per hour</i>	<i>Per hour</i>		
New Orleans, La.....	May 4	.52½	.45	40	40
		<i>Per week</i>	<i>Per week</i>		
San Francisco, Calif., and vicinity.....	May 1	40. 00	37. 00	54	54
Furniture workers:		<i>Per hour</i>	<i>Per hour</i>		
Boston, Mass., carpet and linoleum layers.....	Apr. 1	1. 37½	1. 17½	40	40
Cleveland, Ohio—					
Retail upholsterers.....	do	1. 16¼	1. 00	40-44	40-44
Carpet and linoleum layers.....	do	1. 20	1. 03	40-44	40-44
Drapery and shade hangers.....	do	1. 02¾	.92½	40-44	40-44
Measure men.....	do	.96	.87½	40-44	40-44
Custom upholstery sewers.....	do	.53¾	.49	40-44	40-44
Carpet and drapery sewers.....	do	.53¾	.49	40-44	40-44
Rochester, N. Y., wood carvers.....	do	1. 65	1. 40	54	30
San Francisco, Calif.—					
Upholsterers, shade makers, and drapery workers.....	May 2	1. 00	.87½	44	44
Carpet and linoleum layers.....	May 1	1. 12½	1. 00	44	40
San Jose, Calif., upholsterers.....	do	1. 00	.87½	44	(1)
Glass-bottle blowers, Pittsburgh, Pa.....	do	.75	.60	48	48
Hotel and restaurant workers, waiters and waitresses:		<i>Per week</i>	<i>Per week</i>		
Boston, Mass.....	June 1	15. 00	12. 00	48	48
New York, N. Y.....	do	20. 00	15. 00	48	54
Portland, Oreg.....	do	16. 00	14. 50	48	36
		<i>Per day</i>	<i>Per day</i>		
Molders, Anaconda, Mont.....	Apr. 1	6. 00	5. 50	48	(1)
Printing and publishing employees:					
Compositors, Knoxville, Tenn.—					
Newspaper, day.....	do	7. 25	6. 55	48	48
Newspaper, night.....	do	7. 75	7. 00	48	48
Mailers—		<i>Per week</i>	<i>Per week</i>		
Des Moines, Iowa.....	July 1	36. 00	36. 50	44-48	44-48
		38. 25	38. 75	44-48	44-48
		41. 25	41. 75	44-48	44-48
New York, N. Y.....	May 1	46. 00	43. 00	44	44
Printing-press assistants, Chicago, Ill.....	May 9	43. 25-49. 00	44. 22-45. 57	44	36-44
Stereotypers, Miami, Fla.:—					
Newspaper, day.....	Apr. 1	48. 00	45. 00	42	42
Newspaper, night.....	do	51. 00	48. 00	42	42
Municipal employees:					
Philadelphia, Pa.—					
Police, firemen, park and prison guards.....	July 1	(1)	(10)	(1)	(1)
Waterloo, Iowa—		<i>Per year</i>	<i>Per year</i>		
City officials.....	Apr. 1	1, 500-4, 200	1, 440-3, 360	(1)	(1)
City-hall employees.....	do	1, 200-1, 920	1, 080-1, 800	(1)	(1)
Police-department employees.....	do	1, 560-2, 700	1, 500-2, 500	(1)	(1)
Fire-department employees.....	do	1, 560-2, 700	1, 500-2, 500	(1)	(1)

¹ Not reported.⁴ Various.¹⁰ 4 per cent reduction.

Farm Wage and Labor Situation, July 1, 1932

THE farm wage and labor situation in different sections of the United States on July 1, 1932, is shown in the following table, compiled from a press release dated July 12, issued by the United States Department of Agriculture.

TABLE 1.—FARM WAGE RATES AND FARM LABOR SUPPLY AND DEMAND, JULY 1, 1932, BY GEOGRAPHIC DIVISION

Geographic division	Wage rates				Farm labor supply and demand		
	Per month		Per day		Supply, per cent of normal	Demand, per cent of normal	Supply, per cent of demand
	With board	Without board	With board	Without board			
North Atlantic.....	\$26.42	\$43.24	\$1.51	\$2.13	125.5	72.8	172.3
North Central.....	20.96	30.38	1.05	1.43	128.0	61.5	208.1
South Atlantic.....	12.30	18.59	.62	.84	114.5	64.7	176.8
South Central.....	12.65	18.54	.61	.80	121.6	57.1	212.9
Far Western.....	29.40	46.01	1.28	1.85	132.7	63.2	209.9
United States.....	18.00	27.10	.89	1.23	123.6	62.0	199.2

Table 2, compiled from data issued by the Department of Agriculture, shows farm wage rates and index numbers by years from 1928 to 1931 and by quarters from January, 1931, to July, 1932, for the country as a whole.

TABLE 2.—FARM WAGE RATES AND INDEX NUMBERS, BY YEARS, 1928 TO 1931, AND BY QUARTERS, JANUARY, 1931, TO JULY, 1932

Year and month	Average farm wage				Index numbers of farm wages (1910-1914 = 100)
	Per month		Per day		
	With board	Without board	With board	Without board	
1928.....	\$34.66	\$48.65	\$1.88	\$2.43	169
1929.....	34.74	49.08	1.88	2.42	170
1930.....	31.14	44.59	1.65	2.16	152
1931.....	23.60	35.03	1.22	1.65	116
1931—January.....	26.03	39.04	1.38	1.87	129
April.....	25.99	38.37	1.33	1.80	127
July.....	25.35	37.00	1.29	1.73	123
October.....	23.31	34.22	1.18	1.59	113
1932—January.....	19.77	30.53	1.02	1.40	98
April.....	19.19	29.13	.97	1.35	94
July.....	18.00	27.10	.89	1.23	87

Salary and Wage Policy in the Depression

THE general lack of knowledge of the extent of salary and wage reductions in industry during the present depression led to a survey¹ recently by the National Industrial Conference Board of the policies now being followed by representative companies. In the beginning of the depression American industrial enterprises very generally underestimated its duration, it is said, and while diminution of output was expected it was not foreseen that such drastic changes would be necessary in conditions of production as to cause general salary and wage reductions. The attempt to maintain wages, moreover, was quite general, being encouraged and urged by officials and others.

Although the wage income was seriously impaired almost from the start, as a result of reduced employment, it was not until comparatively recently that it became apparent that general wage and salary

¹ National Industrial Conference Board (Inc.). Salary and wage policy in the depression. New York, 247 Park Avenue, 1932.

reductions could not be avoided. It is evident, it is said, that in practically all fields of management every means of reducing costs without changing rates of remuneration was tried before the pressure of business conditions forced such a reduction as a condition of continuing business operations. "An enforced reduction of the volume of business," the report says, "usually means an increase of unit costs, including generally the labor cost per unit of product. When increasing unit costs are accompanied by declining prices for the products, a situation arises that threatens business extinction. Only through drastic reductions in cost can a business so situated be saved from collapse."

The depression of 1930 differed in respect to wage reductions from that of 1920-1922. In both cases the depression followed a period of abnormal business activity in which relatively high money earnings had been the rule in most business enterprises. In the earlier period, however, the decline in business activity led in 1921 to a widespread reduction in wage rates with a less extensive reduction in salaries. Figures compiled by the National Industrial Conference Board covering wages in manufacturing industries show that average hourly earnings in these industries declined 19.3 per cent between the fourth quarter of 1920 and that of 1921 but from the last quarter of 1929 to that of 1930 the decline was only 1.7 per cent. After the present depression had entered the second year, however, with no improvement evident in business conditions, it became necessary for business management to review its salary and wage policy with consequent readjustment of rates.

The study covered a total of 1,718 concerns, and the replies to the inquiry were received between March 15 and May 1, 1932, so that salary or wage reductions becoming effective after the latter date are not covered. The firms included in the study employed a total of 3,258,666 persons in 1929, whereas in 1932 the total employment in these establishments was 2,391,009, a reduction of 26.6 per cent. The firms covered by the inquiry are representative of major business fields, 63.5 per cent of the persons employed being in manufacturing industries, 19.1 per cent in railroads, about 5 per cent each in other public utilities, extraction and refining, and trade, and the remaining 1.5 per cent in financial institutions. The employees covered represent 16 per cent of those gainfully employed in the six major business fields covered. The fact that the survey covered many large concerns is also significant both because of the large numbers affected by their policies and because of the tendency of smaller concerns to follow the example of the larger units. Among the companies furnishing information, a reduction in executive salaries had been made by 80.5 per cent; 81 per cent had reduced other salaries; and 75.4 per cent had reduced wage rates. These percentages varied considerably, however, among the different business groups. The highest proportion of companies making reductions was found among railroads, followed by manufacturing enterprises. Only 33.3 per cent of the public utility companies furnishing information had reduced salaries and 25 per cent had reduced wages, while in the financial institutions 28.6 per cent had reduced the salaries of executives and 24.5 per cent other salaries.

An important factor in the tendency to maintain wage and salary rates during the first year of the depression was the theory that high wages are a factor in prosperity since they are expected to create and maintain large-scale purchasing power. Although this assumption is theoretically correct, the caution resulting from uncertainty as to the future always manifests itself at such a time and there is a general tendency to reduce purchases so that even though for a time purchasing power remains unaffected it is withheld as effectively as if it did not exist. The result is that it does soon cease to exist in any such volume as formerly. The only remedy for such a condition, it is stated, is some form of assurance of at least a minimum amount of employment and income for a specified period. Some companies have taken the lead in giving such assurances to their employees, but they are still too few in number to exert an appreciable effect on the national situation.

In the study no attempt was made to measure total loss of earnings during the depression. Among salaried employees the reduction in salary rate does fairly closely represent the loss in earnings although not to the extent that was the case in earlier depressions. Formerly the payment of salaried workers was independent of working time and in general this is still the case, but during the present depression a number of concerns have reduced the working time of salaried employees with a proportionate reduction in weekly remuneration. This reduction in working time has usually been from five and a half to five days per week but in some cases employees have been required to take off a certain number of days per month without pay. Although such a policy is still not general the number of such cases is large enough to be taken into account. With this exception, however, the salary reductions shown in the report do measure the actual loss in earnings of this class of workers. Reductions in the scale of wages among wage earners, on the other hand, do not represent the total loss in earnings as it is probable that only a small proportion of wage earners are now working anywhere near full time. The reductions in wage rates have, therefore, further lessened the earning power already weakened by part-time employment and it is stressed in the report that the percentages of wage-scale reductions shown measure the loss of potential and not actual earning power.

Extent and Severity of Salary and Wage Reductions

THE policies of individual industries in regard to reduction in pay vary widely. Thus, executive salaries have been reduced by all the reporting companies in the automobile industry and in the stove and furnace division of the foundry group, while in lumbering and logging and heavy equipment at least 95 per cent have done so. In 17 other industries 90 per cent or more have made reductions. Among banks and insurance companies, in petroleum refining, pharmaceutical chemicals, meat packing, news and magazine publishing, tobacco, and laundries 50 per cent or less had reduced the salaries of executives, the lowest percentage, 4.8, being shown by insurance companies. Practically the same situation is found with regard to other salaries. These salaries had been reduced by all the reporting companies in wire and cable manufacture and in the stove and furnace industry, while the lumbering and heavy equipment groups again showed over

95 per cent of the companies making such reductions. Groups of companies showing 50 per cent or less of the group reporting reductions in other salaries are practically the same as for executives except that glass manufacture is substituted for the tobacco industry. In this group, insurance companies are also lowest, with 4.8 per cent having made salary reductions. Although fewer companies among those reporting have reduced wages than have reduced salaries, a very high proportion have reduced wage rates in a large number of industries. In the hosiery, flour-milling, lumbering, stove and furnace, and textile finishing industries all the companies had reduced the wages while more than 90 per cent of the reporting companies in 11 other industries had done so. In eight industries 50 per cent or less of the companies had lowered the wage rates, the lowest proportion of companies, 21.4 per cent, being in the pharmaceutical chemical industry.

The percentages of workers affected in plants making reductions was very high, the total averaging 97.5 per cent. In 19 industries all the wage earners were affected and in comparatively few was the proportion lower than 90 per cent. It is considered worthy of note that for all the companies which made no wage reductions the decline in employment between 1929 and 1932 was only 14.7 per cent as compared with an average of 26.6 per cent for all the companies included in the survey, indicating that decline in employment is to a certain extent an index of how much the activity has been curtailed or of how seriously a concern has been affected by the business depression.

The extent and the severity of salary and wage reductions are the two important factors in a period of readjustment such as the present. The average severity of reduction may be computed either as a simple or as a weighted average. In the present study both averages are given. In the weighted average the percentages by which compensation scales were reduced in each company are multiplied or weighted by the number of persons affected and the sum of these products is divided by the total number of employees in the companies making the reductions. The simple average shows the general policy of management in making reductions, as the action of each establishment has equal weight in finding the average for the group. However, a very large company has no greater effect on this simple average than a very small company, although it is of considerably greater importance, industrially and socially, that a company employing 20,000 persons has reduced wages 10 per cent than that one with 50 employees has done so. The weighted average is used, therefore, to show the real extent to which the purchasing power of wage earners and salaried employees has been affected by the reductions in rates of pay. The simple average of reduction in executive salaries was 20.3 per cent but the average, weighted according to the number of persons affected in each company was 14.9 per cent. For other salaries the simple and weighted averages were, respectively, 15.9 per cent and 13.1 per cent, and for wages 13.9 per cent and 11.1 per cent. The fact that the weighted average is lower than the simple average shows, particularly in the case of executive salaries and to a lesser extent in other salaries and wages, that a larger proportion of persons was affected by the lower percentage reductions or, in other words, that the more severe reductions applied to a comparatively small proportion of the total.

The figures show that, in general, the most severe reductions in pay scales have been made by the smaller firms. This is shown most clearly by the simple and weighted averages for executive salaries. The simple average of severity for all companies, of 20.3 per cent, compared with the weighted average of 14.9 per cent, shows clearly that these salary reductions were less severe in the larger companies. This tendency is still apparent though not quite so clearly marked in the case of other salaries, but it is less clear in the case of wages, mainly, it is said, because wage reductions are usually kept within rather narrow limits. However, it is still evident that the larger percentage reductions were made by the smaller companies. This was particularly true in petroleum refining, meat packing, and in the manufacture of miscellaneous food products, automobiles, cutlery and hand tools, and boxes and cartons, while the industries in which the large companies made the most drastic wage reductions were furniture, agricultural implements, structural steel fabrication, rubber tires, and silk manufacturing. It is said that it may be a surprise to many that the smaller companies have made the more severe reductions as the prominence given by newspaper reports to compensation reductions by the larger companies tends to associate wage reductions in the public mind with the larger industrial concerns.

Other Methods of Reducing Compensation

THE most important method of reducing compensation is, of course, through straight percentage reductions in the scales of pay. For one reason or another companies have not always been able to put into effect a straight percentage reduction or have not found it desirable to do so. In cases where the base-rate level is set below the prevailing level it is the practice to pay the supplementary remuneration on some profit-sharing basis. When this method of payment is followed the earnings of employees are automatically increased in prosperous periods without changing the basic rates and just as automatically decreased when profits are diminished.

The most usual method of effecting pay-roll economies, however, when a straight percentage reduction of rates is not used, is through consolidation of jobs or demoting employees to lower-paid jobs. Consolidation of jobs or demotion was reported by 125 companies. Among the companies which made special efforts to effect pay-roll economies without changing basic salary rates, working hours have been reduced and payment has been made only for time worked. This has been done either by reducing the work week or by special furloughs. In other instances paid vacations have been suspended. Seventy-two companies reported plans of this general character. The elimination of bonus payments was reported by 32 companies. Incentive systems in which additional payment is made for production above the standard set also offer an opportunity for reducing wage costs, and reduction in wage costs through raising the standards in such systems was reported by 51 companies.

The question of labor policy in connection with pay reduction is also of interest. In the present study information was received from 88 unionized plants, and, while this is not regarded as a wholly satisfactory sample, it is considered suggestive of what has happened in such plants. Among the union plants it was found that the policies

in regard to compensation reductions had not differed materially from those of the open-shop plants. Executive salaries had been reduced in 78.4 per cent of the union plants and in 83.1 per cent of the open-shop plants, while the percentages for other salaries were 78.4 per cent and 84 per cent, respectively, and for wage rates 72.7 per cent and 76.7 per cent, showing that almost as large a proportion of union plants as of open-shop plants had made reductions.

The study shows that there appears to be some correlation between the ratio of wage cost to total cost of production and the extent and severity of wage reduction. Among the industries in which wage cost forms a comparatively high proportion of cost of manufacture it was found that a large proportion of the companies had reduced wage rates and that the reductions on the average were somewhat higher than for other industries.

In conclusion it is stated that the study seems to show that the attitude of management throughout the depression has seemed to be that of trying to effect the necessary pay-roll economies with the least possible hardship for all concerned and it is said that probably never before has the lowering of rates of pay been accompanied by so little resentment and feeling of injustice. "Whatever the ultimate effects of the reduction in compensation scales," the report concludes, "it must be recognized that this policy has been adopted in most cases because of urgent necessity. American business is passing through one of the most difficult periods it has ever encountered. Survival is the first consideration in any organization, and stockholders, management, and employees have all had to assist in this difficult situation by accepting a lower scale of earnings. This partnership in distress should lead to a broader and more tolerant understanding of one another's points of view and result in better coordination of effort and greater cooperation when business again moves forward."

Forty-Hour Week Established by Standard Oil Co. of New Jersey¹

A NORMAL 40-hour week, consisting of a maximum of five working-days or its equivalent, was established for its entire domestic operations by the Standard Oil Co. of New Jersey, to become effective July 1. This step was taken by the company in order to give the personnel "all practicable assurance of continued employment and to effect further economies in operation."

The plan, as announced to the employees, provides for a normal working week of five days for all salaried and wage-earning employees of the company in this country. However, each of the subsidiary companies will determine for its various departments whether this reduction in working time shall be taken off currently each week or in one or more periods over the year. Hourly wage earners will continue to be paid on the basis of time actually worked, but salaried employees, including salaried wage earners, on a 5½-day schedule prior to July 1, will go on a 5-day basis with a reduction in pay of one-eleventh. This reduction to a 5-day basis will not affect salaries

¹ The Lamp, New York, June, 1932.

of \$100 or less per month, however, nor will it result in a reduction below \$100 for those receiving more than that amount. The salaries of executives and others of the management will be reduced one-eleventh even though their responsibilities make an actual 5-day week impossible.

All reductions in compensation will be deducted from current pay rolls even though the time off is taken in one or more periods.

If, after the scheduled reduction of hours, there is a surplus of employees in any department or plant, a further reduction will be made in the time schedule with a corresponding reduction in pay in order to keep the force and available work in balance. It is provided, however, that no employee's working time shall be reduced to less than 50 per cent of full time.

The president of the company, in making the announcement of the shorter week to the employees, stated that he was confident that the employees generally understood that the company could not carry on as though business were not undergoing a serious downward revision and that the part-time and part-pay schedule would be preferred to a horizontal salary reduction. He stated, also, that the program will result in giving work to a substantial number now unemployed and thus will be a real contribution by the company and the present employees toward the solution of this most serious problem.

In connection with the announcement of the shorter working week, attention is called in an editorial in *The Lamp* to the fact that the past 40 years have seen the transition from the 12-hour to the 8-hour day in manufacturing enterprises—a change in working time which enabled industry to meet the otherwise lowered employment opportunities resulting from the development of labor-saving machines and increased productive capacity. The present unemployment situation, it is said, inevitably leads to the question whether the remedy does not lie in a further general reduction in hours of work. "Such a program would permit of absorbing the unemployed of all classes back into their regular occupations as accountants, sales people, clerks, etc., whereas the alternative suggestion of vast public construction jobs would make places almost exclusively for manual labor and engineers. The same amount of work would be done and the change would only result in a more general division of the pay roll. Yet the effect should be to start taking the unemployed off the list of dependents and thus make them self-supporting." Even with a lessened number of working hours the assurance of continued employment, together with the reduction in the cost of living, would allow budgets to be adjusted to the new conditions and would release frozen purchasing power.

The only objection to the shorter work which can not be satisfactorily answered, it is said, is the uncertainty as to its general acceptance by all employers within competitive groups, since individual employers can not operate indefinitely on shorter hours if competitors insist upon retaining the former schedule of working time with its lower unit labor cost.

Six-Hour Shifts of India Tire & Rubber Co.

AN ACCOUNT of the facts and circumstances incidental to the adoption of the 6-hour shift system by the India Tire & Rubber Co. was furnished to the Bureau of Labor Statistics by Mr. J. E. Lorentz, general superintendent of the company.

Although the establishment of the 6-hour shift system in this plant is a development of conditions of manufacturing peculiar to certain operations in the industry, it has proved so satisfactory from the standpoints of improved production, reduced labor costs, and reduction in absenteeism that it has been gradually extended to other departments of the plant.

The plan was first applied in the curing or vulcanizing department of the plant—commonly called the “pit”—in the summer of 1931. In this department the work is hot and humid and considerable skill is required. Tire demand is naturally highest in the hot season and full 7-day (24 hours) mold operation is commonly necessary in this department. The attempt to keep the men at work for 8 hours per day 7 days in the week had not proved satisfactory over a period of several years from the standpoint of production and of operating costs. The experiment of introducing one more shift of curing men was therefore tried, with the following results: (1) One-third more workmen were given employment; (2) loss of production was reduced so that at no time did it exceed 5 per cent, with many days showing a perfect score; (3) absences which had been an appreciable factor on the 8-hour basis declined almost to the vanishing point; (4) the labor cost per unit cured declined 8.2 per cent.

The reduction in labor cost was computed by comparing two months in which conditions were identical with the exception that in one month the work was on a 3-shift basis, and in the other on a 4-shift basis.

After watching this installation for a few months, covering both the busy and slack seasons, it was decided to begin extension of the 4-shift system to other departments of the plant. At the present time most of the workmen are on the 6-hour basis, but it has not yet been applied to salaried employees, although it is said that eventually it will be extended to include everyone.

The direct savings as a result of the extension of the plan are less easy to compute than those of the vulcanizing department because of general rate reductions that have taken place in the past 12 months throughout the industry, but it is considered that the savings are at least equal to those secured in the first instance. No upward adjustment of rates was made when the 6-hour shift was installed.

In conclusion Mr. Lorentz states, “We have not attempted to outline the sociological advantages incident to shortened working periods and the employment of men who otherwise would have no work. All of these have been pointed out in other articles. Our experience bears out all of these advantages and the plan, in general, seems entirely sound and workable.”

Normal and Actual Hours of Work in Illinois Manufacturing Establishments, 1930 to 1932

THE following table is drawn from the Illinois Labor Bulletin of May, 1932, and reflects conditions as of April, each year, 1930 to 1932. The 1932 figures for normal hours of males are based on reports from 834 establishments employing 98,865 males, and those for females on reports from 456 establishments employing 24,947 females. The 1932 figures for actual hours of males are based on returns from 793 establishments employing 91,609 males, and those for females from 427 establishments employing 23,720 females. The publication does not state the number of establishments or employees covered in 1930 or 1931.

The story told by this table is very significant. To illustrate, in April, 1930, 36.6 per cent of the male workers had a normal day of 8 hours or under, and 41.1 per cent were actually working 8 hours or under. By April, 1931, an increased percentage of the establishments (40.3) had come to a normal day of 8 hours or under, but work was so curtailed that 56.6 per cent of the male workers were working 8 hours per day or under.

In April, 1932, there was a slight falling off in the percentage of workers having a normal day of 8 hours or under, but in actual fact, 57.7 per cent of the male workers were working 8 hours or less.

The story of hours per week is even more interesting. In April, 1930, 61.9 per cent of the male employees were actually working 48 hours or less per week. Actual working hours were so curtailed by April, 1931, that 74.1 per cent of all male employees were actually working 48 hours or under, and by April, 1932, 85.3 per cent of all the Illinois male factory workers who were working actually worked 48 hours or less per week.

PERCENTAGE DISTRIBUTION OF EMPLOYEES IN MANUFACTURING ESTABLISHMENTS OF ILLINOIS, BY SEX AND BY NORMAL AND ACTUAL HOURS OF WORK, APRIL, 1930 TO 1932

Working hours	Males (cumulative per cent)						Females (cumulative per cent)					
	April, 1930		April, 1931		April, 1932		April, 1930		April, 1931		April, 1932	
	Normal hours	Actual hours	Normal hours	Actual hours	Normal hours	Actual hours	Normal hours	Actual hours	Normal hours	Actual hours	Normal hours	Actual hours
Per day:												
Under 8 hours.....	0.8	5.5	2.8	12.4	1.2	19.6	0.2	8.1	4.9	22.6	2.4	26.5
8 hours and under.....	36.6	41.1	40.3	56.6	39.3	57.7	28.2	28.7	48.9	56.3	35.8	51.3
Under 9 hours.....	56.6	62.1	49.7	66.7	60.7	77.6	69.2	76.0	65.6	74.6	73.0	82.8
9 hours and under.....	84.0	86.2	78.2	88.0	81.8	90.0	90.8	92.0	89.2	92.1	90.1	93.6
Under 10 hours.....	88.3	89.9	85.5	92.2	89.2	94.8	93.1	94.0	94.0	96.2	94.3	98.3
10 hours and under.....	97.9	97.6	97.2	97.8	98.4	97.9	100.0	100.0	100.0	100.0	100.0	100.0
Under 12 hours.....	99.5	99.2	99.4	98.8	99.2	99.2	-----	-----	-----	-----	-----	-----
Per week:												
Under 32 hours.....	-----	2.6	-----	14.6	-----	29.9	-----	2.1	-----	17.2	-----	36.0
32 hours and under.....	-----	5.0	-----	22.2	-----	35.0	-----	2.4	-----	22.8	-----	39.9
Under 40 hours.....	-----	10.3	-----	30.5	0.2	48.6	-----	12.0	-----	32.3	0.0	53.4
40 hours and under.....	-----	16.5	0.7	36.5	3.2	56.7	-----	17.6	0.5	40.2	1.6	61.1
Under 44 hours.....	2.9	19.8	.8	40.6	6.3	63.1	2.0	20.8	1.0	47.3	3.9	66.1
44 hours and under.....	12.0	26.6	12.9	49.0	17.3	67.1	18.5	29.3	25.9	56.7	21.1	73.0
Under 48 hours.....	16.7	34.4	19.2	62.2	25.0	76.8	28.6	34.4	47.5	70.2	41.0	85.2
48 hours and under.....	52.0	61.9	44.3	74.1	54.1	85.3	66.8	74.9	65.1	78.3	71.8	89.2
Under 50 hours.....	57.5	68.0	50.8	77.6	60.2	88.4	73.2	83.3	71.7	81.0	77.4	92.3
50 hours and under.....	73.5	77.9	66.7	83.0	73.3	90.7	86.0	91.6	85.8	87.5	89.5	96.3
Under 56 hours.....	91.1	91.2	90.4	93.6	93.7	96.4	99.2	99.6	99.2	99.7	99.4	99.9
Under 60 hours.....	96.1	96.6	94.7	97.3	97.2	98.8	99.3	99.8	99.2	99.8	99.4	100.0

Reduction in Wages of Coal Miners in Nova Scotia

ON March 14, 1932, the Nova Scotia miners voted against accepting the wage reduction of 10 per cent for day workers and 12½ per cent for those paid by the ton or yard, etc., recommended by the Royal Commission on Coal Mining in Nova Scotia (1932) for the employees in the Dominion Steel & Coal Corporation's mines.¹ According to the Canadian Labor Gazette of June, 1932, this wage cut became effective March 15 of this year. A special district convention at New Glasgow, on April 18, authorized the miners' executive to take up with the corporation the matter of a wage increase and, failing to secure this increase, take a strike vote. In the early part of May a conference was held between the miners' representatives and officials of the corporation, when the latter stated that the wage cut would continue in effect. On May 26 a ballot of the miners was taken, and the majority voted to accept the reduction. In June the district officers met the corporation's officials to sign the new agreement on the basis of the royal commission's recommendations.

Wages and Working Conditions in Cigarette Factories in India

THE product of the bidi² industry in India is described in the volumes of evidence presented to the British Royal Commission on Labor in India,³ from which the information given in this article is taken, as "a type of indigenous cigarettes from Indian tobacco rolled up in tendu leaves." The bidis are made by hand in factories, but it seems to be the custom for the workers to prepare at home the leaves in which the tobacco is wrapped.

The size of the industry in India as a whole is not shown in the source of information mentioned, but apparently it is extensive, at least in some parts of the country. In the Central Provinces in 1930 it was furnishing employment to over 42,000 persons, and in the city of Madras, Presidency of Madras, the number employed in bidi making was estimated by an investigating committee in 1929 as about 35,000, composed roughly of 20,000 men, 1,000 women, and 14,000 children. The industry has grown rapidly in the Central Provinces. The census of 1921 enumerated 164 establishments employing 7,680 persons. In 1930 the number of establishments had reached 866 and the number of workers, 42,240. Of the 866 establishments, 185 employed more than 50 persons each. The 42,240 employees were made up of 18,257 males, 10,073 females, and 13,910 children.

Children as young as 5 years of age were found to be employed. In Madras, boys between the ages of 5 and 15 years constituted over 50 per cent of the working force in some factories. In the Central Provinces the employment of children, especially of those under 12 years of age, is said to have decreased, owing to the introduction of compulsory primary education in some of the bidi-making centers.

¹ For résumé of this report see Labor Review, Washington, May, 1932, pp. 1059-1061.

² Also spelled "beedy."

³ Great Britain. Royal Commission on Labor in India. Evidence. Vol. VII, pt. 1; Vol. XI, pt. 1. London, 1931.

In 1927, 15,568 children (of whom half were below 12 years of age) were employed in 776 establishments, as compared with the 13,910 children (about 43 per cent of whom were 12 years of age or under) employed in 866 establishments in 1930.

In the Central Provinces, wages are paid on a piece-rate basis per 1,000 bidis manufactured, the rate depending upon the "finish." In 1930 the rates ranged from 5 to 10 annas (11.5 to 23.0 cents),⁴ the most prevalent rate being 7 annas (16.1 cents). Earnings per day vary greatly, depending, of course, upon the skill of the individual. Skilled workers sometimes make as many as 2,000 bidis a day, but the average number made is said to be less than 1,000. The average earnings in 1930 were from 8 to 10 annas (18.4 to 23.0 cents) for adults and from 4 to 5 annas (9.2 to 11.5 cents) for children. Deductions of up to 10 per cent or more of the fixed rates are invariably made for bad work, and no payment is made for bidis not passed by the head office of the employing firm. The report states that "the practice lends itself to abuses and cases have been reported in which a whole day's output is so rejected." Table 1 shows the range in earnings in a number of localities in the Central Provinces.

TABLE 1.—AVERAGE EARNINGS OF BIDI WORKERS IN THE CENTRAL PROVINCES OF INDIA

[Conversions into United States currency on basis of rupee (16 annas)=36.5 cents]

Locality	Daily earnings of—				
	Men	Women	Children	Packers	Staff
	Cents	Cents	Cents		
Nagpur.....	18.4-23.0	13.8-16.1	6.9-9.2		¹ \$5.48-\$9.13
Kamptee.....	23.0-36.8	18.4-27.6	6.9-9.2		¹ 5.48-12.78
Gondia.....	13.8-23.0	9.2-18.4	6.9-11.5		
Tumsar.....	13.8-20.7	11.5-18.4	9.2-13.8		
Bhandara.....	18.4	11.5	6.9		
Katni.....	13.8-18.4	11.5-13.8	6.9-9.2	¹ \$4.38-\$7.30	
Sihora.....	18.4-27.6	9.2-11.5	² 6.9-9.2	.18	
Kota (Bilaspur).....	13.8	9.2	³ 6.9		
Jabalpur.....	18.4-23.0		² 9.2	¹ 4.38-5.48	

¹ Per month.

² Boys.

In Madras adults are always paid at piece rates. In 1929 the rate paid was 12 annas (27.6 cents) per 1,000 bidis. Boys are paid on a weekly basis in most cases, the amount received depending upon age and capability. Table 2 shows the rates said to be typical of those paid boys of average ability (working 12 to 15 hours a day).

TABLE 2.—WEEKLY WAGES PAID TO BOYS MANUFACTURING BIDIS IN MADRAS, INDIA, 1929

[Conversions into United States currency on basis of anna=2.3 cents]

Age	Approximate weekly wage		Age	Approximate weekly wage	
	Indian currency	United States currency		Indian currency	United States currency
	Annas			Annas	
5 years.....	2	\$0.046	11 years.....	12	\$0.276
6 years.....	3	.069	12 years.....	16	.368
7 years.....	3	.069	13 years.....	16	.368
8 years.....	4	.092	14 years.....	32	.736
9 years.....	4	.092	15 years.....	48	1.104
10 years.....	8	.184			

⁴ Conversions into United States currency on basis of anna=2.3 cents.

Wages and Hours in the Clothing Industry in the Union of South Africa

IN 1925 the Union of South Africa passed an act, amended in 1930, establishing a wage board for the Union, consisting of three members, to which the governor might add for any industry two members, representing, respectively, the employers and the employees. Upon this board's recommendation, after investigation, the governor might make an award setting hours, wages, and other conditions for the industry. An award, dated April 22, 1932, relating to the clothing manufacturing industry, has been received from the United States consul at Johannesburg.

The districts in which the award is to be operative are first specified, and terms are defined. A "qualified employee" is one who has been employed in the industry for not less than five years, if a male, and for not less than three, if a female. A learner is one who has had less than the required period of employment, according to sex. All employment is counted, even though it may have been served under a number of different employers. For the different classes of employees the minimum weekly wage is as follows:

Males:	£	s.	d. ¹	
Qualified employee-----	3	0	0	(\$11.25)
Learners:				
First year of employment-----	0	17	6	(\$3.28)
Second year-----	1	5	0	(\$4.69)
Third year-----	1	12	6	(\$6.09)
Fourth year-----	2	2	6	(\$7.97)
Fifth year-----	2	10	0	(\$9.38)
Females:				
Qualified employee-----	2	0	0	(\$7.50)
Learners:				
First 3 months-----	0	15	0	(\$2.81)
Next 9 months-----	0	17	6	(\$3.28)
Second year-----	1	5	0	(\$4.69)
Third year-----	1	12	6	(\$6.09)

Pieceworkers are to receive not less than they would have been entitled to under this award had they been working at a weekly rate. Wages are to be paid in cash weekly, or on termination of service, if this takes place before the ordinary pay day of the establishment. No fines or deductions from an employee's wages may be made except in carefully specified contingencies. Hours are not to exceed 48 a week, with time and a quarter for overtime and for Sunday and holiday work. For short time the following provision is made:

Where short time is being worked in an establishment an employee, whether on time or piecework, who on any day attends at the establishment on the instructions of the employer or his representative, shall be entitled to be employed for at least four hours on such day or to receive a minimum of one-twelfth of his weekly wage in lieu thereof. If an employee is not required to attend on any day he must be informed prior to such day that his services will not be required, otherwise if he does attend he shall be deemed to be attending on the instructions of the employer.

The proportion of learners to journeymen is thus prescribed:

One male qualified employee shall be employed by an employer before a male learner may be employed by him, and the number of male learners employed by him shall not exceed twice the number of male qualified employees employed by him.

¹ Conversions on basis of exchange rate of pound for April, 1932=\$3.75.

One female qualified employee shall be employed by an employer before a female learner may be employed by him, and the number of female learners employed by him shall not exceed three times the number of female qualified employees employed by him.

It is specified, however, that in determining the ratio of learners a learner who is paid the wage of a qualified employee may be counted as a qualified employee.

General Survey of Wages in Bulgaria in 1931 ¹

LABOR conditions in industrial and commercial enterprises in Bulgaria are regulated by law. Home work is not controlled by law unless the work is dangerous or injurious.

Hours of Labor

THE working-day for workers of both sexes over 18 years of age is fixed at eight hours. No overtime work is permitted under the law. Voluntary agreements between employers and workers for overtime work with extra pay are not acceptable to the authorities charged with the enforcement of the law. Approval of such agreements was recently sought by certain textile manufacturers, but was refused by the labor section of the Ministry of Commerce, Industry, and Labor. Overtime work without compensation does, however, obtain in many establishments, the workers accepting the situation without complaint to the authorities for fear of being dismissed and remaining unemployed, especially in view of the economic crisis which has resulted in decreased production and increased unemployment.

The law further provides for from one to three rest periods in the day's work, the total resting time to be not less than two hours, of which one hour is for the midday meal. An uninterrupted rest of 36 hours at the week end is obligatory.

In dangerous and injurious work (specification of which is under the Supreme Council of Labor at the Ministry of Commerce, Industry, and Labor) and in night work, the working time is fixed at six hours per day. The use of female labor at night is forbidden.

Children under 14 years of age may not be employed, and "juniors" under 16 years may work only six hours per day and may not be employed for dangerous or injurious work.

Payments Supplementary to Wages

NO ADDITIONS to wages, in the form of family allowances, payments in kind, paid holidays, free housing, or the use of land and gardens, are known. In a few cases where the workers are housed and boarded, payment is made therefor at low rates by deductions from wages. In the State-owned coal mines, coal is distributed to the workers at reduced prices.

Deductions from Wages

ALL workers and employees in private enterprises (and also those in State enterprises when not affected by the law on State pensions) are subject to social insurance. Deductions therefor from wages

¹ This article was prepared from a report by Maynard B. Barnes, American consul at Sofia, dated Apr. 4, 1932.

consist of 5 leva (3.6 cents)² annually for an insurance booklet and weekly contributions by special stamps to be affixed to the booklet. The stamps are of two classes: (1) General stamps, for "illness, maternity, invalidity, and old age"; and (2) special stamps, for (a) "illness and maternity," and (b) for "invalidity and old age" (the last not yet being in use). The weekly contributions are as follows:

TABLE 1.—RATES OF WEEKLY CONTRIBUTIONS TO SOCIAL INSURANCE IN BULGARIA, THROUGH GENERAL AND SPECIAL STAMPS

[Conversions into United States currency on basis of lev=0.72 cent]

Daily wage	Rate—general stamps		Rate—special stamps	
	Bulgarian currency	United States currency	Bulgarian currency	United States currency
	<i>Leva</i>	<i>Cents</i>	<i>Leva</i>	<i>Cents</i>
Up to 15 leva (10.8 cents).....	6	4.3	3	2.2
16 to 30 leva (11.5 to 21.6 cents).....	8	5.8	4	2.9
31 to 45 leva (22.3 to 32.4 cents).....	10	7.2	5	3.6
46 to 60 leva (33.1 to 43.2 cents).....	12	8.6	6	4.3
Over 60 leva (43.2 cents).....	16	11.5	8	5.8

Only one-half of the weekly contribution is deducted from the workers' wages, the remaining half being paid by the employers; the State adds, as its contribution, one-half of the amounts thus collected.

All workers and employees are subject to an occupational tax, at the rate of 4 per cent of the annual salary received. There is also a general income tax, but the bulk of the workers are exempt from this tax, as the tax is on all income over 100,000 leva (\$720) per year, and few workers have an annual salary over that amount. Taxes are not deducted from the wages, except in a few cases, where tax collectors make arrangements with employers to do so.

Wages in Bulgarian Industries

WAGE rates in 1931 on the whole decreased considerably as compared with 1930, owing to the prevailing economic crisis. There was a general decrease of about 20 per cent and in certain cases the decrease was as much as 40 per cent. All wage rates shown in the following tables represent gross wages.

In Table 2 are presented daily wages in the construction industry in April and November of 1930 and 1931, by occupation.

TABLE 2.—DAILY WAGES IN THE CONSTRUCTION INDUSTRY IN BULGARIA, 1930 AND 1931, BY OCCUPATION

[Conversions into United States currency on basis of lev=0.72 cent]

Occupation	April, 1930		November, 1930		April, 1931		November, 1931	
	Bulgarian currency	United States currency	Bulgarian currency	United States currency	Bulgarian currency	United States currency	Bulgarian currency	United States currency
	<i>Leva</i>	<i>Cents</i>	<i>Leva</i>	<i>Cents</i>	<i>Leva</i>	<i>Cents</i>	<i>Leva</i>	<i>Cents</i>
Wall builders.....	130	93.6	130-140	93.6-100.8	100	72.0	120	86.4
Woodworkers.....	130	93.6	130	93.6	100	72.0	120	86.4
Stoneworkers.....	150	108.0	160	115.2	140	100.8	140	100.8
Concrete makers.....	70	50.4	130	93.6	100	72.0	80	57.6
General workers.....	65	46.8	80-90	57.6-64.8	60	43.2	60	43.2

² Conversions into United States currency on basis of lev=0.72 cent.

Table 3 shows the hourly wage rates in the metal, tanning, and tobacco industries, in 1930, by occupation and sex.

TABLE 3.—HOURLY WAGE RATES IN THE METAL, TANNING, AND TOBACCO INDUSTRIES IN BULGARIA, 1930, BY OCCUPATION AND SEX

[Conversions into United States currency on basis of lev=0.72 cent]

Industry, occupation, and sex	Wage rate per hour					
	Average		Maximum		Minimum	
	Bulgar- ian cur- rency	United States cur- rency	Bulgar- ian cur- rency	United States cur- rency	Bulgar- ian cur- rency	United States cur- rency
<i>Metal industry</i>						
	<i>Leva</i>	<i>Cents</i>	<i>Leva</i>	<i>Cents</i>	<i>Leva</i>	<i>Cents</i>
Founders (<i>fondeurs</i>), male.....	10.41	7.6	25.00	18.0	5.62	4.0
Turners (<i>tourneurs</i>), male.....	11.51	8.3	30.00	21.6	5.62	4.0
File workers (<i>serruriers</i>), male.....	9.33	6.7	35.00	25.2	5.62	4.0
Smiths (<i>forgerons</i>), male.....	11.15	8.0	22.50	16.2	6.00	4.3
Woodworkers (<i>menuisiers</i>), male.....	12.47	9.0	30.00	21.6	5.62	4.0
Dyers (<i>teinturiers</i>), male.....	10.45	7.5	25.00	18.0	5.62	4.0
Tinkers (<i>ferblantiers</i>), male.....	8.77	6.3	30.00	21.6	3.25	2.3
Boilermakers (<i>chaudronniers</i>), male.....	8.71	6.3	32.50	23.4	3.75	2.7
General workers, male.....	7.75	5.6	16.87	12.1	1.87	1.3
<i>Tanning industry</i>						
Tanners, male.....	9.44	6.8	35.00	25.2	2.50	1.8
Other workers (including machinists and firemen), male.....	9.76	7.0	35.00	25.2	2.50	1.8
<i>Tobacco industry</i>						
Cigarette factories:						
General workers, male.....	10.44	7.5	45.00	32.4	3.50	2.5
General workers, female.....	5.76	4.1	12.50	9.0	2.38	1.7
Leaf tobacco preparation:						
Skilled workers in preparation and fermentation, male.....	19.59	14.1	57.50	41.4	6.25	4.5
Stiff makers (<i>Istifchis</i>), male.....	9.42	6.8	20.00	14.4	2.50	1.8
Bundle makers (<i>Denkchis</i>), male.....	10.08	7.3	15.00	10.8	3.25	2.3
Bundle makers, female.....	8.39	6.0	11.88	8.6	4.38	3.2
Handlers (<i>Aktarmajis</i>), male.....	9.31	6.7	17.50	12.6	4.25	3.1
Handlers, female.....	7.56	5.4	11.25	8.1	3.75	2.7
Screeners, female.....	7.23	5.2	10.63	7.7	2.50	1.8
General workers, male.....	6.09	4.4	12.50	9.0	2.50	1.8
General workers, female.....	5.36	3.9	10.63	7.7	1.50	1.1

Table 4 gives an idea of the daily wages of workers in the principal industries of Bulgaria in 1930, the table showing the number of workers in the groups receiving each classified amount of wages. As can be seen, wage rates in 1930 were comparatively low. Over 65 per cent of the total workers shown in the table were employed at a daily wage of from 31 to 80 leva (22.3 to 57.6 cents). Only 7,226 workers received a wage of over 100 leva (72 cents) per day.

TABLE 4.—CLASSIFIED DAILY WAGES IN SPECIFIED INDUSTRIES IN BULGARIA IN 1930

[Conversions into United States currency on basis of lev=0.72 cent]

Industry	Number of workers with classified daily wages								Total
	Un- paid (ap- pren- tices)	Up to 15 leva (10.8 cents)	16-30 leva (11.5- 21.6 cents)	31-45 leva (22.3- 32.4 cents)	46-60 leva (33.1- 43.2 cents)	61-80 leva (43.9- 57.6 cents)	81-100 leva (58.3- 72.0 cents)	Over 100 leva (72.0 cents)	
Coal mining.....			2	158	701	3,930	1,226	1,881	7,898
Metal mining.....			31	265	410	215	251	160	1,332
Quarries.....			18	40	481	315	317	108	1,279
Salt works.....					21	131	266	175	593
Textile.....	2	320	3,106	3,733	2,252	1,583	465	445	11,906
Leather.....		1	18	151	216	473	219	127	1,205
Woodworking.....	83	196	320	417	429	609	1,243	601	3,898
Metal.....	185	172	435	568	1,149	820	410	353	4,092
Ceramic.....		319	1,403	2,333	1,617	1,071	464	259	7,466
Chemical.....		29	207	627	622	407	372	191	2,455
Paper.....		84	339	513	138	70	18	31	1,193
Food and drink.....	9	44	996	2,776	2,586	2,318	1,805	1,131	11,665
Tobacco.....		195	6,189	8,980	9,751	6,130	2,616	673	34,534
Clothing.....	4	11	149	257	293	141	120	132	1,107
Construction.....			28	326	525	523	415	244	2,061
Power stations.....			3	31	269	561	344	382	1,590
Graphics.....	1	33	163	229	209	184	187	332	1,338
Art, luxury, and other articles.....			2	10	6	1	2	1	22
Scrap and waste.....						1	2		
Total.....	284	1,404	13,409	21,414	21,675	19,483	10,742	7,226	95,637

General Survey of Wages in Turkey, 1931¹

LABOR in Turkey is not organized on western lines, and though State regulation of the conditions of labor has recently been established, it is not rigidly enforced. With the exception of large industrial plants in which labor conditions have been considerably improved during the last decade, wage rates in general are left for agreement between the workers and their employers. Social insurance, minimum wage scales, and sanitary requirements do not exist.

Hours of Labor

THE hours of labor vary in the different industries. In automobile assembling the working hours are 8 per day and 40 per week; in tin factories and coal mining 8 per day and 48 per week; in petroleum distribution, 8½ on 5 days and 5½ on 1 day, or 48 per week; in the leather and tanning industry, 8½ per day and 51 per week; in the textile, carpet, and woodworking and furniture industries, 9 per day and 54 per week; in logging and lumbering, 10 hours per day and 60 hours per week in summer, and 8 per day and 48 per week in winter; in the fruit-packing industry, 11 per day and 66 per week; and in flour milling, 11 per day and 68 per week. In mining, 10 hours constitute a day's labor in summer and from sunrise to sunset in winter, and in agriculture the daily hours are from sunrise to sunset in winter and from sunrise to one hour following sunset in summer.

¹ This article was prepared from reports by Dominic Cariciopulo, of the American consulate at Istanbul (Sept. 28, 1931) and George W. Renchard, vice consul at Izmir (Oct. 28, 1931).

Payment for Overtime and Holidays

IN MOST industries no provision is made for overtime. In tin factories, flour milling, and the leather and tanning industry, however, overtime is paid for at the regular rate, and in the textile and woodworking and furniture industries the worker is paid at the rate of a full day's pay for 6 hours of overtime and half a day's pay for 3 hours of overtime. Since 1924 a law has provided for a compulsory rest time of 24 hours a week. This law is strictly observed. In general no provision is made for payment for holidays, it being rather the exception not to find workers working until noon on holidays, with the exception of Friday, the Moslem Sabbath.

Supplementary Payments and Deductions

IN COAL mining a production bonus is paid when the worker's daily output exceeds 500 kilograms,² the bonus being based on the percentage of increase over that amount. In most other industries no additions to wages are made, but free medical assistance is given by the automobile assembling and textile industries and by some logging and lumbering companies. In tin factories certain classes of permanent workers receive free housing, light, and water, and in coal mining permanent workers are given free housing, bathing facilities, and medical assistance.

Workers are subject to a Government tax amounting to 7 per cent of their wages. The employers are responsible to the Government for the amount which is deducted from the wage.

Wages

RATES of wages paid in the Istanbul and Izmir districts in the latter part of 1931 are presented in the table following. The Izmir district (Izmir is not only the chief city of the district but also the second city of Turkey in population and trade) depends for its prosperity on agricultural products. The marketing of these products has been extremely unsatisfactory the last three seasons, resulting in an impairment of the purchasing power of the people. This low purchasing power of the people has produced a low standard of living, and Izmir as a consequence is a relatively cheap labor market despite the comparative sparsity of the population of the region. The one industry employing a large number of workers the year round is carpet weaving. Tobacco companies and dried-fruit packing establishments employ seasonal labor for periods ranging from two to six months.

² Kilogram=2.2046 pounds.

DAILY WAGES IN TURKISH INDUSTRIES, 1931

[Conversions into United States currency on basis of £T (paper pound)=48 cents]

Industry	Daily wages		Industry	Daily wages	
	Turkish currency	United States currency		Turkish currency	United States currency
<i>Istanbul district</i>	<i>£ T</i>		<i>Istanbul district—Con.</i>		
Automobile assembling.....	¹ 1.20- 1.60	¹ \$0.58-\$0.77	Logging and lumbering:	<i>£ T</i>	
	¹ 1.80- 1.00	¹ .38- .48	Foremen.....	3.00- 4.00	\$1.44-\$1.92
Tin:	¹ 1.50- .65	¹ .24- .31	Workers.....	.80- 1.00	.38- .48
Foremen.....	2.75- 3.50	1.32- 1.68	<i>Izmir district</i>		
Skilled workers.....	1.75- 2.50	.84- 1.20	Tobacco:		
Solderers.....	1.75	.84	Female workers		
Mechanics.....	2.25- 3.00	1.08- 1.44	(preparation).....	.50- 1.00	.24- .48
Tinsmiths.....	1.60- 3.00	.77- 1.44	Male workers (bal-	1.50	.72
Pipe fitters.....	2.00- 3.25	.96- 1.56	ing).....	1.50- 2.50	.72- 1.20
Carpenters and ma-			Stevedores.....		
sons.....	2.50- 3.75	1.20- 1.80	Fruit packing:		
Painters.....	2.20- 3.00	1.06- 1.44	Foremen.....	6.00-10.00	2.88- 4.80
Boilermakers.....	1.50- 3.50	.72- 1.68	Skilled workers,		
Coppersmiths.....	3.50	1.68	male.....	³ 3.50- 4.50	³ 1.68- 2.16
Electricians.....	² 95.00	² 45.60	Skilled workers, fe-		
Textile:			male.....	.80- 1.10	.38- .53
Skilled foremen.....	3.00- 4.50	1.44- 2.16	Ordinary labor.....	³ 1.10- 2.00	³ .53- .96
Other foremen.....	2.00	.96	Other workers, fe-		
Weavers.....	3.00- 4.00	1.44- 1.92	male.....	.60- 1.00	.29- .48
Other workers.....	1.50	.72	Carpets:		
Apprentices.....	.70- 1.20	.34- .58	Skilled workers ⁴	³ .20	³ .10
Carpet: Female work-			Agriculture:		
ers.....	1.00- 2.50	.48- 1.20	Skilled labor, male		
Woodworking and fur-			(pruning vines,		
niture:			etc.).....	1.30- 2.00	.62- .96
Skilled foremen.....	8.00	3.84	Common labor,		
Other foremen.....	4.00- 6.00	1.92- 2.88	male.....	.80- 1.20	.38- .58
Workers.....	1.50- 3.50	.72- 1.68	Tobacco, poppy,		
Flour milling:			and cotton pick-		
Foremen.....	² 90.00	² 43.20	ers, female.....	.60- .80	.29- .38
Workers.....	² 40.00-60.00	² 19.20-28.80	Licorice:		
Leather and tanning:			Diggers, skilled.....	2.40	1.15
Foremen.....	4.00- 5.00	1.92- 2.40	Common laborers.....	⁵ .20	⁵ .10
Workers.....	2.00- 3.00	.96- 1.44	Weighers.....	.80- 1.20	.38- .58
Coal mining:			Petroleum distribution:		
Foremen.....	2.00- 3.00	.96- 1.44	Machine operators.....	1.25- 2.75	.60- 1.32
Workers.....	1.20- 1.60	.58- .77	Filling-room work-		
Other mining:			ers.....	⁶ 2.00- 2.75	⁶ .96- 1.32
Foremen.....	1.50	.72	Warehouse workers.....	1.35- 2.25	.65- 1.08
Workers.....	.80	.38	Engine-room work-		
Ore sorters, female.....	.40- .50	.19- .24	ers and mechanics.....	2.25- 6.00	1.08- 2.88
Agriculture:					
Permanent workers.....	² 20.00-35.00	² 9.60-16.80			
Day laborers (often					
women).....	.40- 1.00	.19- .48			

¹ Hourly wages, varying according to efficiency or length of service.² Monthly wages.³ Earnings at piecework.⁴ Mostly young girls.⁵ Minimum.⁶ Fillers, cappers, stackers, truckers, examiners, etc.

TREND OF EMPLOYMENT

Summary for June, 1932

EMPLOYMENT decreased 3.0 per cent in June, 1932, as compared with May, 1932, and earnings decreased 6.4 per cent.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the earnings for one week, for both May and June, 1932, together with the per cents of change in June are shown in the following summary:

SUMMARY OF EMPLOYMENT AND EARNINGS, MAY AND JUNE, 1932

Industrial group	Estab- lish- ments	Employment			Earnings in 1 week		
		May, 1932	June, 1932	Per cent of change	May, 1932	June, 1932	Per cent of change
1. Manufacturing.....	18,492	2,682,893	2,585,108	-3.7	\$50,012,799	\$46,465,357	-7.5
2. Coal mining.....	1,302	246,177	222,047	-9.8	4,307,157	3,270,095	-24.1
Anthracite.....	160	91,499	72,455	-20.8	2,304,699	1,488,103	-35.4
Bituminous.....	1,142	154,678	149,592	-3.3	2,002,458	1,781,992	-11.0
3. Metalliferous mining.....	247	23,357	19,630	-16.0	454,285	382,299	-15.8
4. Quarrying and nonmetallic mining.....	634	24,051	23,556	-2.1	410,737	381,858	-7.0
5. Crude petroleum producing.....	278	21,667	21,527	-0.6	707,642	673,286	-4.9
6. Public utilities.....	11,974	640,525	635,296	-0.8	18,825,698	18,333,537	-2.6
Telephone and telegraph.....	8,011	285,190	282,548	-0.9	7,886,569	7,813,231	-0.9
Power and light.....	3,470	223,493	221,553	-0.9	7,023,964	6,716,209	-4.4
Electric railroad and motor bus operation and maintenance.....	503	131,842	131,195	-0.5	3,915,165	3,804,097	-2.8
7. Trade.....	16,069	415,084	407,777	-1.8	9,367,443	8,967,561	-4.3
Wholesale.....	2,756	71,832	71,071	-1.1	2,071,451	1,967,916	-5.0
Retail.....	13,313	343,252	336,706	-1.9	7,295,992	6,999,645	-4.1
8. Hotels.....	2,428	139,360	135,574	-2.7	2,030,934	1,934,143	-4.8
9. Canning and preserving.....	857	29,995	41,070	+36.9	465,234	523,653	+12.6
10. Laundries.....	985	60,843	60,563	-0.5	1,030,700	1,002,119	-2.8
11. Dyeing and cleaning.....	392	12,220	12,308	+0.7	249,762	244,280	-2.2
12. Building construction.....	10,349	83,050	81,581	-1.8	2,076,555	2,028,236	-2.3
Total.....	64,007	4,379,222	4,246,037	-3.0	\$9,968,946	\$4,206,424	-6.4

¹ Weighted per cent of change for the combined 89 manufacturing industries, repeated from Table 1, manufacturing industries; the remaining per cents of change, including total, are unweighted.

² The amount of pay roll given represents cash payments only; the additional value of board, room, and tips can not be computed.

Data are not yet available concerning railroad employment for June, 1932. Reports of the Interstate Commerce Commission for Class I railroads show that the number of employees (exclusive of executives and officials) decreased from 1,072,524 on April 15, 1932, to 1,067,732 on May 15, 1932, or 0.4 per cent; the amount of pay roll decreased from \$126,468,966 in April to \$124,727,062 in May, or 1.4 per cent.

Per capita weekly earnings in June, 1932, for each of the 16 industrial groups included in the bureau's monthly trend of employment survey, together with the per cents of change in June, 1932, as compared with May, 1932, and June, 1931, are given in the table follow-

ing. These per capita weekly earnings must not be confused with full-time weekly rates of wages, as they are computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

PER CAPITA WEEKLY EARNINGS IN JUNE, 1932, IN 16 INDUSTRIAL GROUPS AND COMPARISON WITH MAY, 1932, AND JUNE, 1931

Industrial group	Per capita weekly earnings in June, 1932	Per cent of change June, 1932, compared with—	
		May, 1932	June, 1931
1. Manufacturing.....	\$17.97	-4.1	-21.4
2. Coal mining:			
Anthracite.....	20.54	-18.5	-19.4
Bituminous.....	11.91	-8.0	-32.5
3. Metalliferous mining.....	19.48	+0.2	-18.8
4. Quarrying and nonmetallic mining.....	16.21	-5.1	-27.1
5. Crude petroleum producing.....	31.28	-4.2	-14.3
6. Public utilities:			
Telephone and telegraph.....	27.65		-5.9
Power and light.....	30.31	-3.6	-4.3
Electric railroads.....	29.00	-2.4	-9.0
7. Trade:			
Wholesale.....	27.69	-4.0	-11.0
Retail.....	20.79	-2.2	-12.6
8. Hotels (cash payments only) ¹	14.27	-2.1	-12.2
9. Canning and preserving.....	12.75	-17.8	-12.0
10. Laundries.....	16.55	-2.3	-11.5
11. Dyeing and cleaning.....	19.85	-2.9	-14.1
12. Building construction.....	24.86	-0.6	(²)
Total.....	³ 19.73	³ -3.6	³ -16.5

¹ The additional value of board, room, and tips can not be computed.

² Data not available.

³ Does not include building construction.

Employment in Selected Manufacturing Industries in June, 1932

Comparison of Employment and Earnings in June, 1932, with May, 1932, and June, 1931

EMPLOYMENT in manufacturing industries decreased 3.7 per cent in June, 1932, as compared with May, 1932, and earnings decreased 7.5 per cent over the month interval. Comparing June, 1932, with June, 1931, decreases of 21.7 per cent in employment and 38.4 per cent in earnings are shown over the year interval.

The per cents of change in employment and earnings in June, 1932, as compared with May, 1932, are based on returns made by 18,492 establishments in 89 of the principal manufacturing industries in the United States, having in June, 2,585,108 employees whose earnings in one week were \$46,465,357.

The index of employment in June, 1932, was 57.7 as compared with 59.7 in May, 1932, 62.2 in April, 1932, and 73.4 in June, 1931. The pay-roll index in June, 1932, was 39.3, as compared with 42.5 in May, 1932, 44.7 in April, 1932, and 63.8 in June, 1931. The 12-month average for 1926 equals 100.

In Table 1, which follows, are shown the number of identical establishments reporting in both May and June, 1932, in the 89 manufacturing industries, together with the total number of employees on the pay rolls of these establishments during the pay

period ending nearest June 15, and the amount of their weekly earnings in June, the per cents of change over the month and the year intervals, and the index numbers of employment and earnings in June, 1932.

The monthly per cents of change for each of the 89 separate industries are computed by direct comparison of the total number of employees and of the amount of weekly earnings reported in identical establishments for the two months considered. The per cents of change over the month interval in the several groups and in the total of the 89 manufacturing industries are computed from the index numbers of these groups, which are obtained by weighting the index numbers of the several industries in the groups by the number of employees or wages paid in the industries. The per cents of change over the year interval in the separate industries, in the groups, and in the totals are computed from the index numbers of employment and earnings.

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN MANUFACTURING ESTABLISHMENTS IN MAY AND JUNE, 1932, AND JUNE, 1931

Industry	Estab- lish- ments report- ing in both May and June, 1932	Employment			Earnings			Index num- bers, June, 1932 (average, 1926=100)	
		Number on pay roll, June, 1932	Per cent of change		Amount of pay roll (1 week), June, 1932	Per cent of change		Em- ploy- ment	Pay- roll totals
			May to June, 1932	June, 1931, to June, 1932		May to June, 1932	June, 1931, to June, 1932		
Food and kindred products.	3,081	234,711	+0.5	-8.4	\$5,236,047	-1.4	-19.7	80.9	69.9
Slaughtering and meat packing.....	226	82,955	-0.7	-4.4	1,828,006	-3.2	-19.1	86.2	73.6
Confectionery.....	337	28,065	-0.3	-15.7	415,863	-2.6	-29.4	65.2	51.2
Ice cream.....	396	14,791	+10.5	-6.2	409,918	+5.5	-18.8	84.7	70.9
Flour.....	437	16,043	-2.1	-2.9	346,661	-6.0	-16.2	82.8	68.3
Baking.....	947	63,724	-0.5	-10.3	1,473,755	-1.3	-20.4	82.4	71.4
Sugar refining, cane.....	16	7,935	-1.7	-7.4	206,204	-2.9	-18.3	74.7	66.7
Beet sugar.....	48	3,102	+18.6	+14.7	78,959	+2.7	-8.0	39.7	35.7
Beverages.....	360	11,737	+5.4	-11.8	330,682	+7.4	-15.9	82.1	74.8
Butter.....	314	6,359	+2.7	-6.8	145,999	-1.2	-16.2	103.4	89.0
Textiles and their products.	3,112	495,773	-6.5	-24.8	5,958,578	-10.0	-46.5	58.6	35.2
Cotton goods.....	683	172,504	-9.7	-25.5	1,670,044	-14.0	-48.3	57.4	35.2
Hosiery and knit goods.....	468	95,386	-1.4	-8.8	1,173,451	-2.1	-32.2	74.7	49.1
Silk goods.....	258	30,522	-10.6	-38.9	370,123	-12.8	-57.1	41.2	24.9
Woolen and worsted goods.....	261	38,763	-2.8	-39.2	564,307	-5.7	-56.2	49.2	32.6
Carpets and rugs.....	32	10,452	-5.4	-32.6	145,837	-12.8	-58.4	52.0	26.2
Dyeing and finishing tex- tiles.....	152	31,252	-4.5	-16.9	545,547	+0.1	-35.0	71.5	49.5
Clothing, men's.....	373	48,505	-6.5	-23.7	553,713	-14.1	-53.4	55.9	25.9
Shirts and collars.....	112	13,407	-0.9	-24.3	137,537	+1.8	-41.0	55.0	34.1
Clothing, women's.....	382	24,032	-9.4	-23.7	367,976	-17.8	-41.3	64.8	36.6
Millinery.....	136	7,141	-11.0	-23.1	106,038	-15.4	-37.8	55.7	35.2
Corsets and allied garments.....	30	5,512	-2.4	-5.0	75,353	-10.6	-26.9	99.0	71.6
Cotton small wares.....	112	8,603	-4.8	-24.2	120,668	-8.4	-43.6	71.6	47.9
Hats, fur-felt.....	39	4,534	-1.0	-27.6	67,199	+12.7	-47.2	56.4	27.7
Men's furnishings.....	74	5,160	-0.2	-23.5	58,785	+2.6	-43.1	56.8	35.7
Iron and steel and their products, not including machinery.	1,629	309,131	-3.3	-22.5	4,423,781	-11.8	-50.4	54.9	26.9
Iron and steel.....	221	184,856	-4.8	-22.3	2,380,377	-17.8	-56.9	54.9	23.3
Cast-iron pipe.....	40	5,976	-7.1	-47.1	81,319	-11.8	-64.0	31.3	17.5
Structural and ornamental ironwork.....	191	16,626	-3.3	-33.0	290,125	-10.9	-53.8	47.7	27.1
Hardware.....	111	22,572	-1.7	-21.4	313,908	-4.0	-44.9	52.4	26.9
Steam fittings and steam and hot-water heating apparatus.....	109	15,729	-0.4	-38.3	285,431	+0.5	-48.7	33.7	20.5
Stoves.....	161	14,394	-7.2	-26.0	234,124	-10.8	-45.4	46.3	25.1
Bolts, nuts, washers, and rivets.....	65	8,499	+7.3	-22.2	129,299	+2.9	-46.5	64.1	35.7

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN MANUFACTURING ESTABLISHMENTS IN MAY AND JUNE, 1932, AND JUNE, 1931—Continued

Industry	Estab- lish- ments report- ing in both May and June, 1932	Employment			Earnings			Index num- bers, June, 1932 (average, 1926=100)	
		Number on pay roll, June, 1932	Per cent of change		Amount of pay roll (1 week), June, 1932	Per cent of change		Em- ploy- ment	Pay- roll totals
			May to June, 1932	June, 1931, to June, 1932		May to June, 1932	June, 1931, to June, 1932		
Iron and steel and their products, not including machinery—Continued.									
Cutlery (not including silver and plated cutlery) and edge tools.....	336	9,703	-6.7	-7.1	\$177,156	-12.8	-22.9	68.9	46.4
Forgings, iron and steel.....	63	5,581	-3.2	-7.0	90,340	-3.7	-34.3	58.2	31.0
Plumbers' supplies.....	66	4,716	-0.7	-16.3	74,780	-0.2	-38.0	63.6	37.3
Tin cans and other tinware.....	57	7,922	+6.7	-11.8	158,142	+6.8	-19.6	76.7	46.8
Tools (not including edge tools, machine tools, files, or saws).....	137	7,218	-5.1	-23.7	115,028	-6.6	-39.5	65.3	37.6
Wirework.....	72	5,339	-0.8	-2.8	93,752	-7.5	-26.0	93.7	65.9
Lumber and allied products.	1,630	119,845	-1.8	-30.3	1,533,859	-5.4	-52.6	37.8	20.9
Lumber, sawmills.....	652	60,071	+ ⁽¹⁾	-30.6	714,445	-3.6	-53.9	35.8	19.3
Lumber, millwork.....	469	19,245	-4.1	-32.8	290,884	-7.0	-52.9	36.5	22.3
Furniture.....	487	39,463	-4.6	-28.8	514,354	-7.9	-51.7	43.0	22.1
Turpentine and rosin.....	22	1,066	+0.2	-25.0	14,176	-7.8	-34.9	44.0	36.4
Leather and its manufac- tures.....	499	126,532	-3.1	-11.5	1,779,130	-1.6	-32.7	69.7	43.4
Leather.....	164	22,596	-5.8	-18.0	415,038	-6.0	-36.3	63.4	46.6
Boots and shoes.....	335	97,926	-2.4	-10.0	1,364,092	-0.3	-31.6	71.3	42.5
Paper and printing.....	1,938	215,572	-2.1	-11.4	5,511,065	-5.4	-24.4	79.9	67.7
Paper and pulp.....	419	77,638	-2.3	-9.5	1,402,414	-9.0	-29.9	73.3	49.9
Paper boxes.....	313	20,113	+0.1	-14.6	365,963	-1.3	-27.6	69.1	57.8
Printing, book and job.....	755	51,391	-3.0	-15.3	1,407,735	-6.1	-28.2	75.1	62.8
Printing, newspapers and periodicals.....	451	66,430	-1.8	-8.0	2,334,953	-3.9	-18.1	97.7	88.4
Chemicals and allied prod- ucts.....	1,017	125,196	-8.9	-17.5	3,032,358	-7.8	-27.5	69.3	60.4
Chemicals.....	125	20,377	-2.9	-12.1	496,176	-6.1	-25.4	83.6	61.6
Fertilizers.....	206	4,536	-44.3	-27.0	64,889	-38.9	-43.2	32.5	25.1
Petroleum refining.....	114	44,784	-0.1	-14.2	1,298,275	-0.7	-20.9	64.7	59.4
Cottonseed oil, cake, and meal.....	48	1,259	-31.6	-16.2	17,328	-23.1	-15.7	23.8	26.4
Druggists' preparations.....	37	5,898	-3.8	-9.3	121,822	-3.8	-18.3	70.5	70.6
Explosives.....	21	2,728	-5.0	-24.7	51,288	-16.2	-42.3	71.3	45.5
Paints and varnishes.....	359	15,479	-1.1	-15.5	368,596	-4.1	-27.5	72.3	61.8
Rayon.....	21	17,729	-28.1	-39.5	302,699	-29.2	-50.3	93.4	78.3
Soap.....	86	12,406	+1.6	-4.4	311,285	+5.9	-14.2	95.7	90.5
Stone, clay, and glass prod- ucts.....	1,367	86,356	-5.4	-36.4	1,460,201	-11.8	-54.0	43.5	27.0
Cement.....	123	13,690	+0.1	-35.4	263,300	-5.0	-56.0	41.5	26.6
Brick, tile, and terra cotta.....	703	20,512	-5.6	-43.7	255,177	-12.0	-63.6	29.8	13.8
Pottery.....	121	14,019	-8.9	-25.4	199,218	-18.0	-46.0	58.1	31.6
Glass.....	192	33,727	-1.8	-24.0	648,476	-6.3	-36.8	57.8	43.9
Marble, granite, slate, and other stone products.....	228	4,408	-13.9	-54.1	94,030	-21.4	-68.3	42.1	27.2
Nonferrous metals and their products.....	638	77,444	-3.1	-22.5	1,299,726	-6.3	-43.0	53.7	34.4
Stamped and enameled ware.....	91	13,158	-3.8	-14.9	218,874	-7.4	-34.5	61.8	40.6
Brass, bronze, and copper products.....	202	27,315	-3.7	-23.3	448,365	-6.7	-45.5	51.9	30.7
Aluminum manufactures.....	28	4,819	-3.9	-39.2	65,475	-11.0	-62.5	46.7	23.9
Clocks, time recording devices, and clock move- ments.....	24	4,679	-4.9	-26.0	62,011	-2.4	-46.6	42.5	26.1
Gas and electric fixtures, lamps, lanterns, and reflectors.....	59	5,060	-0.2	-23.9	109,220	+1.2	-36.4	68.5	50.7
Plated ware.....	54	7,287	-2.1	-20.1	130,012	-7.0	-36.2	60.6	36.3
Smelting and refining— copper, lead, and zinc.....	27	7,842	-2.1	-17.7	135,389	-6.7	-46.0	60.5	40.1
Jewelry.....	153	7,284	-3.4	-28.0	130,380	-5.4	-43.7	35.8	22.9
Tobacco manufactures.....	239	57,035	+2.6	-13.0	756,998	+7.8	-23.6	71.1	55.5
Chewing and smoking tobacco and snuff.....	37	10,318	+2.6	+9.3	142,187	+2.4	-4.9	89.4	73.3
Cigars and cigarettes.....	222	46,720	+2.5	-15.9	614,811	+8.5	-26.0	68.7	53.3

¹ Less than one-tenth of 1 per cent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN MANUFACTURING ESTABLISHMENTS IN MAY AND JUNE, 1932, AND JUNE, 1931—Continued

Industry	Estab- lish- ments report- ing in both May and June, 1932	Employment			Earnings			Index num- bers, June, 1932 (average, 1926=100)	
		Number on pay roll, June, 1932	Per cent of change		Amount of pay roll (1 week), June, 1932	Per cent of change		Em- ploy- ment	Pay- roll totals
			May to June, 1932	June, 1931, to June, 1932		May to June, 1932	June, 1931, to June, 1932		
Transportation equipment	422	267,057	-1.0	-18.5	\$5,911,327	-11.2	-25.4	59.0	44.6
Automobiles.....	242	221,188	-0.1	-17.9	4,822,908	-12.1	-24.2	61.0	45.8
Aircraft.....	35	6,646	-5.6	-38.1	208,763	-2.0	-40.6	196.6	202.6
Cars, electric and steam railroad.....	34	4,457	-7.3	-30.9	77,100	-12.7	-37.6	19.0	11.3
Locomotives.....	14	3,006	-11.0	-39.2	68,552	-15.6	-48.7	18.0	14.3
Shipbuilding.....	97	31,760	-3.6	-14.4	734,004	-4.9	-26.3	83.9	66.2
Rubber products	152	74,499	+1.3	-11.2	1,621,799	+10.1	-25.0	67.6	51.1
Rubber tires and inner tubes.....	39	45,381	+1.8	-10.2	1,135,380	+17.7	-23.5	65.8	53.9
Rubber boots and shoes.....	10	10,650	+0.4	-15.7	159,372	-9.0	-26.4	55.8	35.4
Rubber goods, other than boots, shoes, tires, and inner tubes.....	103	18,468	+1.1	-10.9	327,047	+0.3	-28.2	80.5	53.5
Machinery, not including transportation equip- ment	1,837	310,318	-5.6	-30.2	5,776,920	-9.7	-47.6	50.1	30.6
Agricultural implements.....	73	4,445	-22.6	-49.7	73,406	-27.8	-48.7	22.1	16.4
Electrical machinery, ap- paratus, and supplies.....	303	127,851	-5.5	-27.7	2,549,982	-8.1	-44.0	59.6	40.9
Engines, turbines, tractors, and water wheels.....	80	15,048	-3.4	-32.5	296,476	-6.2	-49.5	45.0	27.6
Cash registers, adding machines, and calculat- ing machines.....	45	14,918	-4.2	-12.2	321,460	-8.5	-34.2	71.1	47.5
Foundry and machine-shop products.....	1,090	105,564	-5.5	-30.8	1,788,820	-10.3	-49.5	46.9	26.1
Machine tools.....	153	11,639	-2.8	-47.2	209,991	-7.6	-59.9	34.5	20.3
Textile machinery and parts.....	33	5,606	-7.1	-30.2	81,963	-18.7	-57.3	52.0	27.4
Typewriters and supplies.....	18	9,017	-13.9	-28.6	124,694	-17.2	-51.5	58.9	31.6
Radio.....	42	16,230	+4.8	-22.2	330,128	+0.8	-33.9	63.9	54.0
Railroad repair shops	911	91,646	-6.0	-22.7	2,163,568	-11.3	-37.3	48.3	38.3
Electric railroad.....	392	20,912	-0.8	-12.5	573,954	-2.7	-20.7	69.4	60.9
Steam railroad.....	519	70,734	-6.6	-23.7	1,589,614	-12.6	-39.1	46.7	36.5
Total—89 industries	18,492	2,585,108	-3.7	-21.7	46,465,357	-7.5	-38.4	57.5	39.3

Per Capita Earnings in Manufacturing Industries

ACTUAL per capita weekly earnings in June, 1932, for each of the 89 manufacturing industries surveyed by the Bureau of Labor Statistics, together with the per cents of change in June, 1931, as compared with May, 1932, and June, 1931, are shown in Table 2.

These earnings must not be confused with full-time weekly rates of wages. They are actual per capita weekly earnings, computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN JUNE, 1932, AND COMPARISON WITH MAY, 1932, AND JUNE, 1931

Industry	Per capita weekly earnings in June, 1932	Per cent of change compared with—	
		May, 1932	June, 1931
Food and kindred products:			
Slaughtering and meat packing.....	\$22.04	-2.5	-15.4
Confectionery.....	14.82	-2.3	-16.5
Ice cream.....	27.71	-4.6	-13.6
Flour.....	21.61	-4.0	-13.5
Baking.....	23.13	-0.7	-11.1
Sugar refining, cane.....	25.99	-1.2	-11.6
Beet sugar.....	25.45	-13.4	-19.8
Beverages.....	28.17	+1.9	-4.8
Butter.....	22.96	-3.8	-9.9
Textiles and their products:			
Cotton goods.....	9.68	-4.8	-30.7
Hosiery and knit goods.....	12.30	-0.8	-25.7
Silk goods.....	12.13	-2.5	-29.9
Woolen and worsted goods.....	14.56	-2.9	-28.1
Carpets and rugs.....	13.95	-7.9	-38.4
Dyeing and finishing textiles.....	17.46	+4.9	-21.8
Clothing, men's.....	11.42	-8.1	-38.8
Shirts and collars.....	10.26	+2.8	-21.6
Clothing, women's.....	15.31	-9.4	-23.4
Millinery.....	15.13	-4.8	-19.1
Corsets and allied garments.....	13.67	-8.4	-23.1
Cotton small wares.....	14.03	-3.7	-25.5
Hats, fur-felt.....	14.82	+13.8	-27.0
Men's furnishings.....	11.39	+2.7	-25.8
Iron and steel and their products, not including machinery:			
Iron and steel.....	12.88	-13.7	-44.6
Cast-iron pipe.....	13.61	-5.0	-31.7
Structural and ornamental ironwork.....	17.45	-7.8	-31.3
Hardware.....	13.91	-2.4	-29.8
Steam fittings and steam and hot-water heating apparatus.....	18.15	+0.9	-16.8
Stoves.....	16.27	-4.0	-26.6
Bolts, nuts, washers, and rivets.....	15.21	-4.2	-31.2
Cutlery (not including silver and plated cutlery) and edge tools.....	18.26	-6.6	-16.8
Forgings, iron and steel.....	16.19	-0.5	-29.2
Plumbers' supplies.....	15.86	+0.4	-26.1
Tin cans and other tinware.....	19.96	+0.1	-8.5
Tools (not including edge tools, machine tools, files, or saws).....	15.94	-1.5	-20.7
Wirework.....	17.56	-6.7	-23.8
Lumber and allied products:			
Lumber, sawmills.....	11.89	-3.6	-33.4
Lumber, millwork.....	15.11	-3.0	-29.9
Furniture.....	13.03	-3.5	-32.2
Turpentine and rosin.....	13.30	-8.0	-12.9
Leather and its manufactures:			
Leather.....	18.37	-0.3	-22.5
Boots and shoes.....	13.93	+2.1	-24.1
Paper and printing:			
Paper and pulp.....	18.06	-6.9	-22.4
Paper boxes.....	18.20	-1.4	-15.1
Printing, book and job.....	27.39	-3.2	-15.2
Printing, newspapers and periodicals.....	35.15	-2.2	-11.0
Chemicals and allied products:			
Chemicals.....	24.35	-3.2	-15.1
Fertilizers.....	14.31	+9.7	-22.4
Petroleum refining.....	28.99	-0.6	-7.9
Cottonseed oil, cake, and meal.....	13.76	+12.3	+0.4
Druggists' preparations.....	20.65	(1)	-10.0
Explosives.....	18.80	-11.7	-23.4
Paints and varnishes.....	23.81	-3.1	-14.5
Rayon.....	17.07	-1.6	-18.0
Soap.....	25.09	+4.2	-10.5
Stone, clay, and glass products:			
Cement.....	19.23	-5.1	-31.8
Brick, tile, and terra cotta.....	12.44	-6.7	-35.1
Pottery.....	14.21	-10.0	-27.2
Glass.....	19.23	-4.6	-17.1
Marble, granite, slate, and other stone products.....	21.33	-8.8	-31.2
Nonferrous metals and their products:			
Stamped and enameled ware.....	16.63	-3.8	-23.1
Brass, bronze, and copper products.....	16.41	-3.1	-29.1
Aluminum manufactures.....	13.59	-7.4	-38.3
Clocks, time-recording devices, and clock movements.....	13.25	+2.6	-27.8
Gas and electric fixtures, lamps, lanterns, and reflectors.....	21.58	+1.5	-16.4

1 No change.

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN JUNE, 1932, AND COMPARISON WITH MAY, 1932, AND JUNE, 1931—Continued

Industry	Per capita weekly earnings in June, 1932	Per cent of change compared with—	
		May, 1932	June, 1931
Nonferrous metals and their products—Continued.			
Plated ware.....	\$17.84	-5.0	-20.1
Smelting and refining—copper, lead, and zinc.....	17.26	-4.8	-34.5
Jewelry.....	17.90	-2.1	-21.9
Tobacco manufactures:			
Chewing and smoking tobacco and snuff.....	13.78	-0.1	-12.9
Cigars and cigarettes.....	13.16	+6.0	-12.2
Transportation equipment:			
Automobiles.....	21.80	-12.0	-7.8
Aircraft.....	31.41	+3.8	-3.9
Cars, electric and steam railroad.....	17.30	-5.9	-9.7
Locomotives.....	22.81	-5.2	-15.7
Shipbuilding.....	23.11	-1.4	-14.1
Rubber products:			
Rubber tires and inner tubes.....	25.02	+15.7	-15.0
Rubber boots and shoes.....	14.96	-9.4	-13.2
Rubber goods, other than boots, shoes, tires, and inner tubes.....	17.71	-0.7	-19.4
Machinery, not including transportation equipment:			
Agricultural implements.....	16.51	-6.8	+1.8
Electrical machinery, apparatus, and supplies.....	19.94	-2.7	-22.2
Engines, turbines, tractors, and water wheels.....	19.70	-2.9	-7.6
Cash registers, adding machines, and calculating machines.....	21.55	-4.5	-25.1
Foundry and machine-shop products.....	16.95	-5.0	-26.7
Machine tools.....	18.04	-5.0	-24.1
Textile machinery and parts.....	14.62	-12.5	-38.7
Typewriters and supplies.....	13.83	-3.8	-32.1
Radio.....	20.34	-3.8	-15.2
Railroad repair shops:			
Electric-railroad repair shops.....	27.45	-1.9	-9.5
Steam-railroad repair shops.....	22.47	-6.5	-20.3

General Index Numbers of Employment and Earnings in Manufacturing Industries

GENERAL index numbers of employment and earnings in manufacturing industries by months, from January, 1926, to June, 1932, together with average indexes for each of the years from 1926 to 1931, and for the 6-month period, January to June, 1932, inclusive, are shown in the following table. In computing these general indexes, the index numbers of each of the separate industries are weighted according to their relative importance in the total. Following this table are two charts prepared from these general indexes showing the course of employment and earnings for each of the years 1926 to 1931, inclusive, and for the months from January to June, 1932.

TABLE 3.—GENERAL INDEXES OF EMPLOYMENT AND EARNINGS IN MANUFACTURING INDUSTRIES, JANUARY, 1926, TO JUNE, 1932
[12-month average, 1926=100]

Month	Employment							Earnings						
	1926	1927	1928	1929	1930	1931	1932	1926	1927	1928	1929	1930	1931	1932
January.....	100.4	97.3	91.6	95.2	90.7	74.6	64.8	98.0	94.9	89.6	95.5	88.1	63.7	48.6
February.....	101.5	99.0	93.0	97.4	90.9	75.3	65.6	102.2	100.6	93.9	101.8	91.3	68.1	49.6
March.....	102.0	99.5	93.7	98.6	90.5	75.9	64.5	103.4	102.0	95.2	103.9	91.6	69.6	48.2
April.....	101.0	98.6	93.3	99.1	89.9	75.7	62.2	101.5	100.8	93.8	104.6	90.7	68.5	44.7
May.....	99.8	97.6	93.0	99.2	88.6	75.2	59.7	99.8	99.8	94.1	104.8	88.6	67.7	42.5
June.....	99.3	97.0	93.1	98.8	86.5	73.4	57.5	99.7	97.4	94.2	102.8	85.2	63.8	39.3
July.....	97.7	95.0	92.2	98.2	82.7	71.7	-----	95.2	93.0	91.2	98.2	77.0	60.3	-----
August.....	98.7	95.1	93.6	98.6	81.0	71.2	-----	98.7	95.0	94.2	102.1	75.0	59.7	-----
September.....	100.3	95.8	95.0	99.3	80.9	70.9	-----	99.3	94.1	95.4	102.6	75.4	56.7	-----
October.....	100.7	95.3	95.9	98.4	79.9	68.9	-----	102.9	95.2	99.0	102.4	74.0	55.3	-----
November.....	99.5	93.5	95.4	95.0	77.9	67.1	-----	99.6	91.6	96.1	95.4	69.6	52.5	-----
December.....	98.9	92.6	95.5	92.3	76.6	66.7	-----	99.8	93.2	97.7	92.4	68.8	52.2	-----
Average.....	100.0	96.4	93.8	97.5	84.7	72.2	62.4	100.0	96.5	94.5	100.5	81.3	61.5	45.5

1 Average for 6 months.

Time Worked in Manufacturing Industries in June, 1932

REPORTS as to working time in June were received from 13,319 establishments in 89 manufacturing industries. Four per cent of these establishments were idle, 42 per cent operated on a full-time basis, and 54 per cent worked on a part-time schedule.

An average of 83 per cent of full-time operation in June was shown by reports received from all the operating establishments included in this tabulation. The establishments working part time in June averaged 71 per cent of full-time operation.

TABLE 4.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN JUNE, 1932

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Food and kindred products.....	2, 375	(¹)	74	26	94	77
Slaughtering and meat packing.....	176		77	23	97	87
Confectionery.....	255	1	34	65	81	71
Ice cream.....	321		67	33	95	85
Flour.....	391	1	70	29	92	73
Baking.....	649		85	15	97	77
Sugar refining, cane.....	12		17	83	82	78
Beet sugar.....	37		92	8	99	84
Beverages.....	313	(¹)	86	14	97	78
Butter.....	221		87	13	98	87
Textiles and their products.....	2, 353	10	42	47	85	71
Cotton goods.....	601	10	30	60	78	66
Hosiery and knit goods.....	374	4	52	44	88	75
Silk goods.....	228	21	36	43	84	70
Woolen and worsted goods.....	214	14	44	43	86	71
Carpets and rugs.....	26	12	12	77	72	68
Dyeing and finishing textiles.....	130	1	33	66	82	73
Clothing, men's.....	236	11	51	38	91	79
Shirts and collars.....	67	13	52	34	92	80
Clothing, women's.....	191	20	60	19	95	80
Millinery.....	93	10	48	42	88	74
Corsets and allied garments.....	21		48	52	88	78
Cotton small wares.....	95	2	41	57	83	71
Hats, fur-felt.....	24	8	25	67	68	56
Men's furnishings.....	53	2	53	45	88	74
Iron and steel and their products, not including machinery.....	973	4	17	78	70	63
Iron and steel.....	143	8	13	78	62	56
Cast-iron pipe.....	36	17	3	81	53	52
Structural and ornamental ironwork.....	131	3	14	83	74	70
Hardware.....	53		15	85	70	64
Steam fittings and steam and hot-water heating apparatus.....	90	3	6	91	60	58
Stoves.....	109	5	8	87	65	62
Bolts, nuts, washers, and rivets.....	49		12	88	70	66
Cutlery (not including silver and plated cutlery) and edge tools.....	92	3	34	63	76	64
Forgings, iron and steel.....	32		25	75	69	59
Plumbers' supplies.....	46	4	22	74	74	66
Tin cans and other tinware.....	46		46	54	88	78
Tools (not including edge tools, machine tools, files, or saw).....	97	3	26	71	71	60
Wirework.....	49	6	16	78	80	76
Lumber and allied products.....	1, 044	5	24	71	75	66
Lumber, sawmills.....	436	7	21	72	73	66
Lumber, millwork.....	272	1	20	79	75	69
Furniture.....	318	6	29	65	76	65
Turpentine and rosin.....	18	6	78	17	96	77
Leather and its manufactures.....	377	3	29	68	79	70
Leather.....	121	1	37	62	86	77
Boots and shoes.....	256	4	25	71	75	67

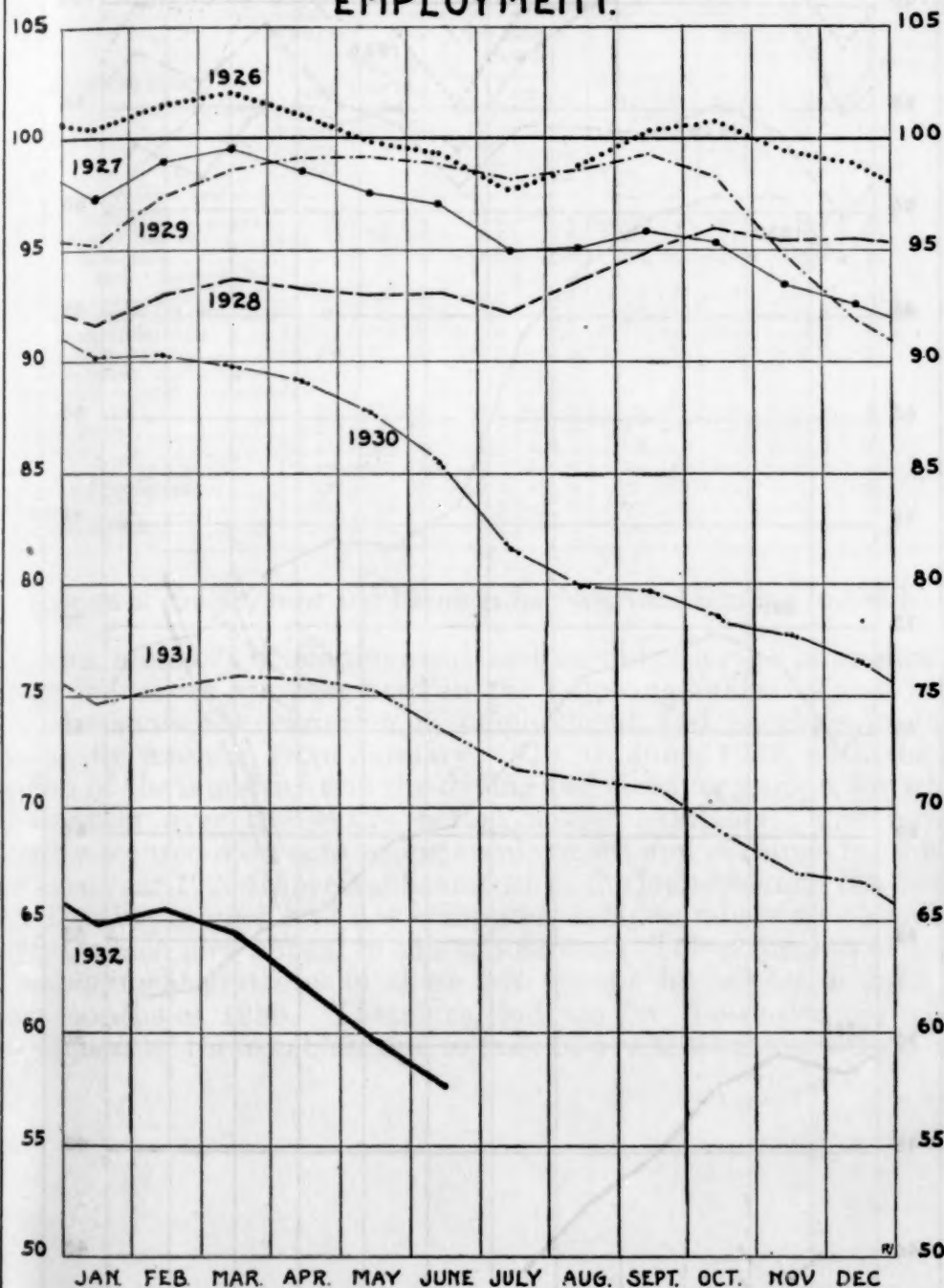
¹ Less than one-half of 1 per cent.

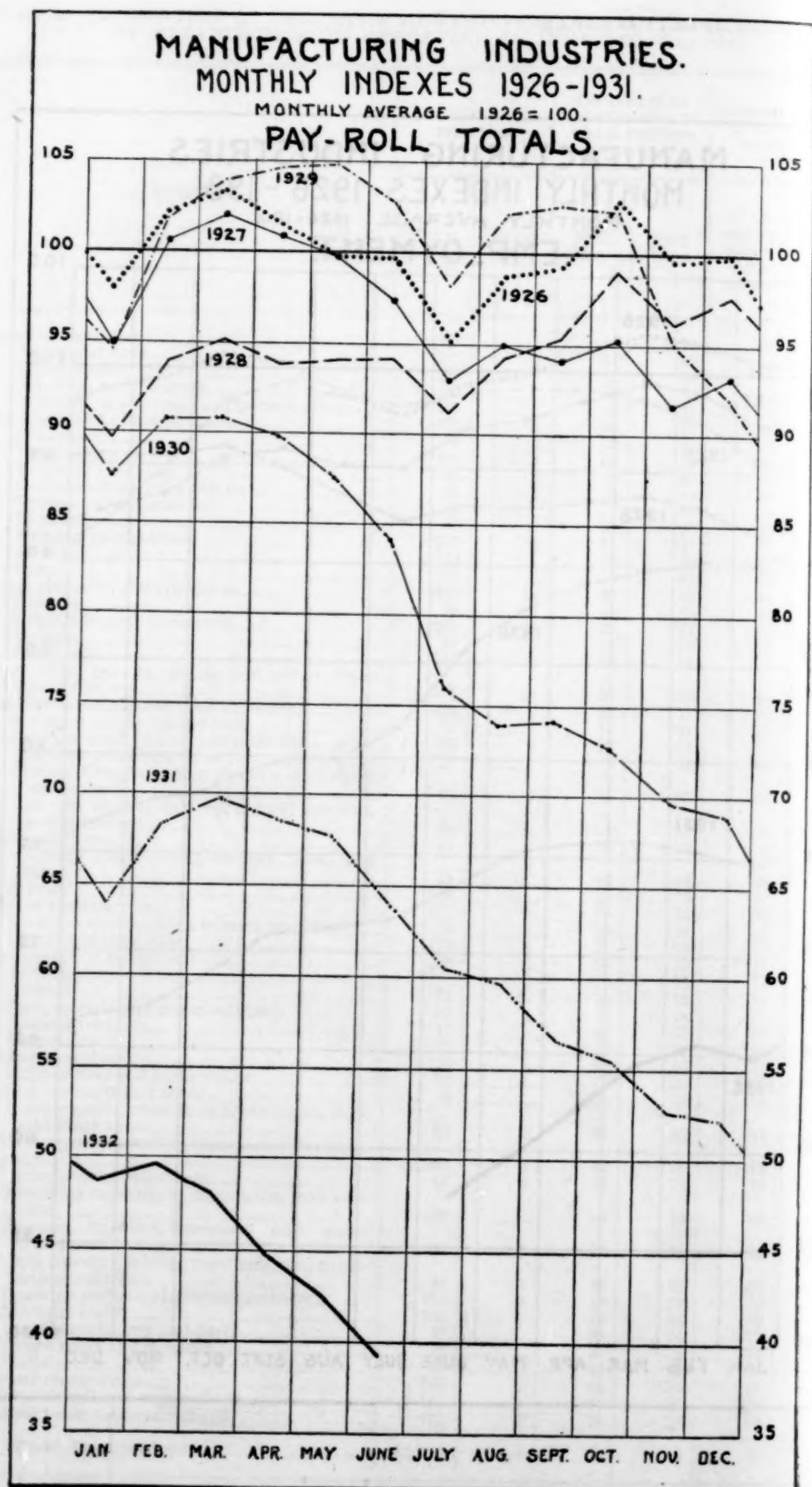
TABLE 4.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN JUNE, 1932—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Paper and printing.....	1,551	1	42	58	86	75
Paper and pulp.....	327	2	31	67	79	69
Paper boxes.....	260	(¹)	15	84	77	73
Printing, book and job.....	587	-----	30	70	85	79
Printing, newspapers and periodicals.....	377	-----	88	12	99	89
Chemicals and allied products.....	771	2	62	36	92	78
Chemicals.....	94	2	67	31	93	78
Fertilizers.....	153	3	58	40	89	74
Petroleum refining.....	66	2	79	20	98	89
Cottonseed oil, cake and meal.....	24	-----	46	54	89	80
Druggists' preparations.....	22	-----	50	50	94	88
Explosives.....	17	6	18	76	63	55
Paints and varnishes.....	316	2	61	37	92	79
Rayon.....	12	-----	50	50	91	81
Soap.....	67	-----	75	25	96	83
Stone, clay, and glass products.....	742	14	40	46	81	66
Cement.....	76	13	75	12	96	73
Brick, tile, and terra cotta.....	275	21	22	57	72	62
Pottery.....	87	5	18	77	70	63
Glass.....	143	8	69	23	94	75
Marble, granite, slate, and other stone products, etc.....	161	12	39	48	84	71
Nonferrous metals and their products.....	469	1	22	77	75	68
Stamped and enameled ware.....	77	-----	13	87	76	73
Brass, bronze, and copper products.....	135	2	22	76	73	66
Aluminum manufactures.....	11	-----	9	91	68	64
Clocks, time recording devices, and clock movements.....	18	6	11	83	65	60
Gas and electric fixtures, lamps, lanterns, and reflectors.....	38	-----	34	66	83	73
Plated ware.....	44	2	16	82	72	67
Smelting and refining—copper, lead, and zinc.....	18	-----	56	44	89	76
Jewelry.....	128	-----	24	76	74	66
Tobacco manufactures.....	211	5	22	73	80	74
Chewing and smoking tobacco and snuff.....	32	-----	25	75	85	79
Cigars and cigarettes.....	179	6	21	73	79	73
Transportation equipment.....	305	5	36	59	81	70
Automobiles.....	161	5	19	76	73	66
Aircraft.....	31	13	74	13	98	89
Cars, electric and steam railroad.....	27	4	19	78	71	65
Locomotives.....	14	-----	43	57	82	68
Shipbuilding.....	72	1	62	36	95	86
Rubber products.....	124	1	45	54	86	74
Rubber tires and inner tubes.....	30	-----	77	23	95	75
Rubber boots and shoes.....	9	-----	22	78	83	79
Rubber goods, other than boots, shoes, tires, and inner tubes.....	85	1	36	62	83	73
Machinery, not including transportation equipment.....	1,262	3	20	78	73	66
Agricultural implements.....	53	9	19	72	79	74
Electrical machinery, apparatus, and supplies.....	187	-----	18	82	76	71
Engines, turbines, tractors, and water wheels.....	57	2	18	81	72	66
Cash registers, adding machines, and calculating machines.....	38	3	42	55	86	75
Foundry and machine-shop products.....	754	3	19	78	70	63
Machine tools.....	108	4	12	84	69	65
Textile machinery and parts.....	27	-----	26	74	77	69
Typewriters and supplies.....	12	-----	25	75	74	66
Radio.....	26	-----	42	58	87	78
Railroad repair shops.....	762	1	44	55	90	82
Electric-railroad repair shops.....	330	-----	64	36	95	86
Steam-railroad repair shops.....	432	2	28	70	86	80
Total, 89 industries.....	13,319	4	42	54	83	71

¹ Less than one-half of 1 per cent.

MANUFACTURING INDUSTRIES. MONTHLY INDEXES 1926-1931. MONTHLY AVERAGE 1926=100. EMPLOYMENT.





Employment in Nonmanufacturing Industries in June, 1932

IN THE following table are presented employment and pay-roll data for 14 groups of nonmanufacturing industries the totals of which also appear in the summary table of employment and earnings.

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN NONMANUFACTURING ESTABLISHMENTS IN MAY AND JUNE, 1932, AND JUNE, 1931

Industrial group	Estab-lishments reporting in both May and June, 1932	Employment		Earnings		Index num-bers June, 1932 (average 1929=100)	
		Number on pay roll, June, 1932	Per cent of change		Amount of pay roll (1 week) June, 1932	Per cent of change	
			May to June, 1932	June, 1931, to June, 1932		May to June, 1932	June, 1931, to June, 1932
Anthracite mining.....	160	72,455	-20.8	-30.4	\$1,488,103	-35.4	-43.9
Bituminous coal mining.....	1,142	149,592	-3.3	-22.8	1,781,992	-11.0	-47.9
Metalliferous mining.....	247	19,630	-16.0	-46.3	382,299	-15.8	-56.4
Quarrying and nonmetallic mining.....	634	23,556	-2.1	-31.5	381,858	-7.0	-50.1
Crude petroleum producing.....	278	21,527	-0.6	-16.6	673,286	-4.9	-28.5
Telephone and telegraph.....	8,011	282,548	-0.9	-8.1	7,813,231	-0.9	-13.6
Power, light, and water.....	3,470	221,553	-0.9	-14.4	6,716,209	-4.4	-18.1
Electric railroad and motor bus operation and maintenance.....	503	131,195	-0.5	-10.3	3,804,097	-2.8	-18.4
Wholesale trade.....	2,756	71,071	-1.1	-11.6	1,967,916	-5.0	-21.3
Retail trade.....	13,313	336,706	-1.9	-10.9	6,999,645	-4.1	-22.1
Hotels.....	2,428	135,574	-2.7	-14.8	1,934,143	-4.8	-25.3
Canning and preserving.....	857	41,070	+36.9	-21.4	523,653	+12.6	-30.9
Laundries.....	985	60,563	-0.5	-11.0	1,002,119	-2.8	-21.2
Dyeing and cleaning.....	392	12,308	+0.7	-14.0	244,280	-2.2	-26.2

Indexes of Employment and Earnings for Nonmanufacturing Industries

INDEX numbers of employment and earnings for 14 nonmanufacturing industries are presented in the following table. These index numbers show the variation in employment and earnings in these groups, by months, from January, 1929, to June, 1932, with the exception of the laundries and the dyeing and cleaning groups, for which information over the entire period is not available. The bureau recently secured data concerning employment and earnings for the index base year 1929 from establishments in the laundries and the dyeing and cleaning groups, and has computed index numbers for these two groups, which now appear in this tabulation. The collection of trend of employment statistics in these two groups did not begin until the later months of 1930. Therefore, indexes for the entire period do not appear in these tables, due to lack of available information.

TABLE 2.—INDEXES OF EMPLOYMENT AND EARNINGS FOR NONMANUFACTURING INDUSTRIES, JANUARY TO DECEMBER, 1929, 1930, AND 1931, AND JANUARY TO JUNE, 1932

[12-month average, 1929=100]

Month	Anthracite mining								Bituminous coal mining							
	Employment				Earnings				Employment				Earnings			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	105.7	102.1	90.6	76.2	100.7	105.8	89.3	61.5	106.4	102.5	93.9	80.8	106.1	101.4	73.3	47.0
February.....	106.0	106.9	89.5	71.2	122.1	121.5	101.9	57.3	107.7	102.4	91.5	77.4	116.6	102.1	68.3	47.0
March.....	98.0	82.6	82.0	73.7	90.8	78.5	71.3	61.2	106.8	98.6	88.8	75.2	108.6	86.4	65.2	46.8
April.....	100.7	84.1	85.2	70.1	88.3	75.0	75.2	72.0	100.2	94.4	85.9	65.5	89.2	81.7	58.6	33.9
May.....	103.7	93.8	80.3	66.9	99.0	98.8	76.1	58.0	96.6	90.4	82.4	62.6	91.9	77.5	54.4	30.7
June.....	92.9	90.8	76.1	53.0	80.7	94.3	66.7	37.4	94.7	88.4	78.4	60.5	90.0	75.6	52.4	27.3
July.....	83.2	91.6	65.1	---	64.7	84.0	53.7	---	94.1	88.0	76.4	---	85.6	68.9	50.4	---
August.....	91.1	80.2	67.3	---	78.4	78.8	56.4	---	95.7	89.2	77.0	---	92.8	71.1	50.6	---
September.....	101.9	93.8	80.0	---	103.8	91.6	64.9	---	97.2	90.5	80.4	---	98.6	74.9	53.6	---
October.....	106.1	99.0	86.8	---	133.9	117.2	91.1	---	98.8	91.8	81.3	---	106.8	79.4	56.2	---
November.....	104.0	97.2	83.5	---	100.5	98.0	79.5	---	101.0	92.5	81.1	---	106.0	79.1	54.6	---
December.....	107.1	99.1	79.8	---	137.2	100.0	78.4	---	101.4	92.5	81.2	---	108.2	77.7	52.3	---
Average.....	100.0	93.4	80.5	68.5	100.0	95.3	75.4	57.9	100.0	93.4	83.2	70.3	100.0	81.3	57.5	38.8
	Metalliferous mining								Quarrying and nonmetallic mining							
	Employment				Earnings				Employment				Earnings			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	93.1	95.7	68.3	49.3	88.0	92.7	55.0	29.7	91.6	79.6	64.4	48.9	85.9	71.9	50.4	30.2
February.....	94.6	92.3	65.3	46.9	91.8	92.5	54.6	27.8	91.9	79.8	66.6	47.4	88.9	73.5	54.4	29.6
March.....	97.0	90.9	63.5	45.0	99.1	90.8	52.8	26.5	96.0	83.0	70.0	46.0	95.0	80.0	58.2	28.7
April.....	100.6	89.3	63.9	43.3	104.6	88.3	51.4	25.0	99.6	87.4	76.1	48.6	100.5	85.4	62.6	30.0
May.....	100.8	87.5	62.4	38.3	104.6	85.6	49.3	23.8	104.1	90.8	75.0	50.6	107.1	90.2	62.3	32.3
June.....	103.8	84.6	60.0	32.2	105.6	81.6	46.1	20.1	106.6	90.3	72.3	49.5	110.5	90.9	60.1	30.0
July.....	101.5	80.5	56.2	---	99.0	71.9	41.3	---	104.7	89.9	71.0	---	104.7	85.5	57.3	---
August.....	103.2	79.0	55.8	---	100.1	71.0	40.2	---	106.7	89.3	68.9	---	110.3	85.8	55.1	---
September.....	102.1	78.1	55.5	---	102.0	69.9	40.0	---	106.6	87.7	66.6	---	109.8	82.5	51.2	---
October.....	101.9	77.2	53.8	---	103.1	68.6	37.4	---	103.6	84.7	64.5	---	105.8	79.3	48.7	---
November.....	103.0	72.8	52.8	---	102.2	63.4	35.1	---	98.6	78.3	59.3	---	96.0	66.8	43.3	---
December.....	98.5	70.1	51.2	---	99.7	59.9	34.3	---	90.1	70.2	53.9	---	85.4	59.9	36.9	---
Average.....	100.0	83.2	59.1	42.5	100.0	78.0	44.8	25.5	100.0	84.3	67.4	48.5	100.0	79.3	53.4	30.1
	Crude petroleum producing								Telephone and telegraph							
	Employment				Earnings				Employment				Earnings			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	90.0	92.7	74.8	54.9	93.1	94.0	71.5	46.5	94.3	101.6	90.5	83.0	94.5	105.1	96.3	89.1
February.....	90.4	90.8	73.2	54.4	99.0	88.6	70.0	46.9	95.3	100.2	89.2	82.0	93.0	101.9	94.8	89.6
March.....	89.6	89.3	72.2	51.4	97.4	91.3	73.2	43.2	96.5	99.4	88.6	81.7	98.7	105.8	97.9	88.2
April.....	97.6	86.8	69.8	54.9	96.7	86.6	66.3	44.5	97.8	98.9	88.1	81.2	98.3	103.4	95.0	83.4
May.....	93.9	89.8	67.8	54.5	92.4	85.4	64.7	47.1	100.4	99.7	87.4	80.6	99.4	103.2	94.1	82.8
June.....	104.1	90.2	65.0	54.2	99.4	87.1	62.7	44.8	101.5	99.8	86.9	79.9	100.0	103.4	95.0	82.1
July.....	106.0	89.9	65.3	---	100.7	88.5	59.2	---	102.6	100.0	86.6	---	104.1	106.6	93.3	---
August.....	113.2	87.7	62.4	---	104.7	86.0	56.3	---	103.7	98.8	85.9	---	101.8	102.5	92.3	---
September.....	108.9	85.0	61.2	---	110.7	84.0	55.2	---	102.5	96.8	85.0	---	100.4	102.2	92.1	---
October.....	107.9	85.2	60.4	---	100.1	82.6	54.4	---	101.9	94.5	84.1	---	105.1	100.9	91.6	---
November.....	101.1	83.6	57.6	---	103.8	80.0	52.0	---	101.9	93.0	83.5	---	101.2	97.9	89.7	---
December.....	97.0	77.4	58.2	---	102.1	77.2	54.9	---	101.8	91.6	83.1	---	103.9	101.3	92.7	---
Average.....	100.0	87.4	65.7	54.1	100.0	85.9	61.7	45.5	100.0	97.9	86.6	81.4	100.0	102.9	93.7	85.9

¹ Average for 6 months.

TABLE 2.—INDEXES OF EMPLOYMENT AND EARNINGS FOR **NONMANUFACTURING** INDUSTRIES, JANUARY TO DECEMBER, 1929, 1930, AND 1931, AND JANUARY TO JUNE, 1932—Continued

[12-month average, 1929=100]

Month	Power and light								Electric-railroad and motor-bus operation and maintenance ¹							
	Employment				Earnings				Employment				Earnings			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....	92.9	99.6	99.2	89.3	91.7	99.7	98.6	88.4	99.7	97.1	86.9	79.5	98.7	97.8	85.6	74.3
February.....	92.6	98.8	97.8	87.2	91.8	100.4	99.7	86.0	99.1	95.1	86.6	78.9	97.6	95.7	87.1	73.6
March.....	92.8	99.7	96.7	85.5	94.5	102.1	102.4	85.4	97.0	94.4	86.4	77.6	98.0	95.4	88.1	72.4
April.....	95.9	100.7	97.1	84.8	95.5	102.6	97.6	82.4	98.5	95.2	86.8	78.0	99.5	97.1	86.6	70.7
May.....	98.4	103.4	97.6	84.0	98.1	104.5	98.7	84.2	100.4	95.2	85.9	76.9	101.0	96.0	85.1	71.2
June.....	100.7	104.6	97.2	83.2	100.4	107.8	98.3	80.5	101.2	94.8	85.3	76.5	101.7	97.0	84.8	69.2
July.....	103.2	105.9	96.7	-----	102.3	106.7	97.4	-----	102.2	95.3	85.6	-----	101.9	95.6	83.3	-----
August.....	105.4	106.4	95.9	-----	103.8	106.6	96.2	-----	102.2	92.9	84.8	-----	102.0	92.1	81.9	-----
September.....	105.5	105.2	94.7	-----	106.6	106.1	94.3	-----	101.4	91.8	84.0	-----	101.5	90.5	81.2	-----
October.....	105.7	104.8	92.7	-----	106.0	105.6	93.2	-----	100.5	91.0	82.7	-----	100.0	88.9	79.0	-----
November.....	104.7	103.4	91.3	-----	104.1	103.7	93.3	-----	99.4	89.3	81.5	-----	98.4	87.7	79.7	-----
December.....	102.5	103.2	90.3	-----	105.8	106.3	91.2	-----	98.3	88.8	79.9	-----	99.8	88.6	77.8	-----
Average.....	100.0	103.0	95.6	185.7	100.0	104.3	96.7	184.5	100.0	93.4	84.7	177.9	100.0	93.5	83.4	171.9
Wholesale trade								Retail trade								
January.....	97.7	100.0	89.5	81.8	96.7	100.0	87.5	74.1	99.2	98.9	90.0	84.3	99.0	99.7	89.4	78.0
February.....	96.9	98.5	88.2	80.9	96.4	98.3	88.4	72.5	94.6	94.4	87.1	80.5	94.5	96.0	86.7	73.7
March.....	97.3	97.7	87.4	79.8	98.5	99.7	89.1	71.3	96.2	93.9	87.8	81.4	96.1	95.5	87.5	73.4
April.....	97.9	97.3	87.4	78.9	97.8	97.9	85.2	68.9	95.5	97.3	90.1	81.6	96.0	97.5	88.3	72.7
May.....	99.0	96.8	87.1	77.9	99.0	97.4	84.7	69.7	97.3	96.7	89.9	80.9	97.1	97.3	88.0	71.1
June.....	99.2	96.5	87.1	77.0	98.6	98.6	84.1	66.2	97.4	93.9	89.1	79.4	98.6	96.8	87.6	68.2
July.....	100.4	96.0	86.8	-----	100.5	96.0	83.3	-----	93.6	89.0	83.9	-----	95.9	91.7	83.3	-----
August.....	101.3	95.0	86.5	-----	100.0	93.6	82.1	-----	93.6	85.6	81.8	-----	95.2	87.6	80.3	-----
September.....	101.9	94.8	86.1	-----	103.3	93.6	81.4	-----	97.6	92.0	86.6	-----	99.2	92.4	83.5	-----
October.....	102.9	94.2	85.2	-----	102.7	92.9	79.9	-----	101.7	95.5	89.8	-----	102.6	95.1	84.6	-----
November.....	102.9	92.6	84.1	-----	101.9	91.0	79.7	-----	106.7	98.4	90.9	-----	105.2	96.8	85.4	-----
December.....	102.6	92.0	83.7	-----	104.7	91.3	77.8	-----	126.2	115.1	106.2	-----	120.6	107.7	94.1	-----
Average.....	100.0	96.0	86.6	179.4	100.0	95.9	83.6	170.5	100.0	95.9	89.4	181.4	100.0	96.2	86.6	172.9
Hotels								Canning and preserving								
January.....	97.1	100.4	95.0	83.2	98.5	100.3	91.0	73.9	50.8	46.1	48.9	35.0	57.3	50.3	46.1	31.8
February.....	99.8	102.4	96.8	84.3	102.0	103.8	93.7	73.9	48.9	45.7	48.3	37.1	59.2	51.5	48.6	32.7
March.....	100.9	102.4	96.8	84.0	103.4	104.4	93.4	72.4	49.4	49.7	53.0	36.3	54.9	50.8	50.3	31.9
April.....	99.7	100.1	95.9	82.7	100.6	100.3	89.9	69.6	90.6	74.8	59.6	47.0	98.9	72.6	57.1	37.9
May.....	98.1	98.0	92.5	80.1	98.9	98.4	87.7	67.0	62.0	65.7	56.0	40.5	71.2	66.9	56.0	36.0
June.....	99.3	98.0	91.6	78.0	98.7	98.1	85.4	63.8	76.6	83.0	70.6	55.5	71.9	81.5	58.6	40.5
July.....	101.1	101.3	93.3	-----	99.8	99.8	85.2	-----	126.8	126.3	102.2	-----	109.2	112.7	74.2	-----
August.....	102.6	101.5	92.8	-----	99.4	98.6	83.8	-----	184.8	185.7	142.9	-----	180.1	172.0	104.7	-----
September.....	102.8	100.1	90.6	-----	100.2	97.1	81.9	-----	210.1	246.6	180.1	-----	207.9	214.8	129.4	-----
October.....	100.6	97.5	87.4	-----	100.2	95.5	79.7	-----	143.3	164.7	108.1	-----	134.5	140.0	77.6	-----
November.....	100.0	95.2	84.9	-----	99.8	93.6	77.1	-----	95.1	96.7	60.8	-----	91.6	82.9	48.1	-----
December.....	97.7	93.5	83.1	-----	98.9	91.5	75.4	-----	61.3	61.6	40.7	-----	63.4	57.4	36.9	-----
Average.....	100.0	99.2	91.7	182.1	100.0	98.5	85.4	170.1	100.0	103.9	80.9	141.9	100.0	96.1	65.6	135.1

¹ Average for 6 months.

² Not including electric-railroad car building and repairing; see transportation equipment and railroad repair-shop group, manufacturing industries, Table 1.

TABLE 2.—INDEXES OF EMPLOYMENT AND EARNINGS FOR **NONMANUFACTURING** INDUSTRIES, JANUARY TO DECEMBER, 1929, 1930, AND JANUARY TO JUNE, 1932—Continued

[12-month average, 1929=100]

Month	Laundries								Dyeing and cleaning							
	Employment				Earnings				Employment				Earnings			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January.....			90.5	84.7			86.6	76.4			88.9	82.1			77.7	65.8
February.....			90.0	82.9			85.6	73.3			87.4	80.5			75.1	62.2
March.....			89.5	82.0			85.6	71.6			88.0	80.6			75.6	61.7
April.....			90.5	82.0			86.8	71.4			95.7	83.3			86.3	65.9
May.....			90.3	81.4			86.5	70.6			96.7	84.5			86.6	67.3
June.....			91.0	81.0			87.1	68.6			99.0	85.1			89.1	65.8
July.....			91.8				87.4				98.6				86.2	
August.....			90.2				84.6				93.5				80.0	
September.....			89.3				84.1				95.3				82.6	
October.....			88.1				81.8				94.2				81.4	
November.....			86.2				78.9				90.1				74.7	
December.....			85.3				77.4				84.9				67.9	
Average.....	100.0		89.4	82.3	100.0		84.4	72.0	100.0		92.7	82.7	100.0		80.3	64.8

1 Average for 6 months.

Trend of Employment in June, 1932, by States

IN THE following table are shown the fluctuations in employment and earnings in June, as compared with May, 1932, in certain industrial groups by States. These tabulations have been prepared from data secured directly from reporting establishments and from information supplied by cooperating State agencies. The combined total of all groups does not include building construction data, information concerning which is published elsewhere in a separate tabulation by city and State totals. In addition to the combined total of all groups, the trend of employment and earnings in the manufacturing, public utility, hotel, wholesale trade, retail trade, bituminous coal mining, crude petroleum producing, quarrying and nonmetallic mining, metalliferous mining, laundries, and dyeing and cleaning groups are presented. In publishing data concerning public utilities, the totals of the telephone and telegraph, power and light, and electric-railroad operation groups have been combined and are presented as one group in this State compilation. Due to the extreme seasonal fluctuations in the canning and preserving industry, and the fact that during certain months the activity in this industry in a number of States is negligible, data for this industry are not presented separately. The number of employees and the amount of weekly earnings in May and June as reported by identical establishments in this industry are included, however, in the combined total of "All groups."

As the anthracite mining industry is confined entirely to the State of Pennsylvania, the changes reported in this industry in the summary table are the fluctuations in this industry by State total.

Where the identity of any reporting company would be disclosed by the publication of a State total for any industrial group, figures for the group do not appear in the separate industrial group tabulation but have been included in the State totals for "All groups." Data are not presented for any industrial group where the representation in the State covers less than three establishments.

COMPARISON OF EMPLOYMENT AND EARNINGS IN IDENTICAL ESTABLISHMENTS
IN MAY AND JUNE, 1932, BY STATES[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued
by cooperating State organizations]

State	Total—all groups					Manufacturing				
	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change
Alabama.....	501	43, 115	-11. 7	\$466, 361	-18. 5	205	28, 526	-11. 6	\$299, 828	-20. 0
Arkansas.....	448	13, 706	-4. 4	207, 410	-5. 4	175	9, 065	-4. 5	119, 149	-5. 8
Arizona.....	374	8, 733	-7. 6	198, 597	-15. 6	62	2, 050	+2. 3	47, 005	-9. 8
California.....	1, 425	210, 718	-0. 3	5, 202, 527	-1. 9	1, 140	124, 868	+0. 2	2, 987, 494	-2. 2
Colorado.....	586	27, 740	-0. 6	585, 156	-3. 6	120	10, 968	+1. 0	225, 516	-4. 2
Connecticut.....	1, 061	124, 860	-3. 3	2, 242, 298	-4. 0	677	105, 725	-3. 8	1, 730, 860	-4. 4
Delaware.....	131	8, 474	(¹)	161, 133	-1. 3	52	5, 575	-3. 0	106, 060	-2. 5
Dist. of Columbia.....	582	29, 317	-2. 1	726, 400	-2. 8	56	4, 064	+1. 5	137, 133	-1. 3
Florida.....	511	21, 869	-0. 2	382, 767	+0. 5	138	14, 265	+4. 6	211, 692	+6. 1
Georgia.....	632	62, 112	-6. 8	777, 050	-10. 0	305	49, 190	-7. 5	491, 503	-12. 6
Idaho.....	202	7, 191	+5. 2	139, 277	+2. 7	39	3, 713	+24. 8	64, 327	+24. 9
Illinois.....	² 1, 488	269, 074	-0. 7	5, 831, 455	-2. 5	996	166, 419	-1. 0	3, 050, 589	-4. 0
Indiana.....	1, 200	111, 253	-0. 3	2, 028, 827	-7. 7	596	82, 195	-1. 3	1, 451, 802	-8. 9
Iowa.....	1, 121	43, 344	-0. 2	867, 151	-1. 5	474	23, 611	+0. 5	463, 159	+0. 9
Kansas.....	³ 635	41, 131	-2. 4	913, 497	-3. 7	431	23, 974	-2. 1	531, 535	-5. 2
Kentucky.....	837	57, 293	-2. 9	861, 324	-6. 5	229	20, 604	-6. 1	335, 966	-7. 8
Louisiana.....	504	28, 789	-3. 4	447, 680	-4. 6	222	17, 678	-2. 1	243, 469	-4. 6
Maine.....	562	33, 314	-6. 7	500, 014	-9. 2	186	26, 513	-8. 3	413, 050	-12. 0
Maryland.....	⁴ 835	73, 183	-3. 5	1, 439, 529	-1. 9	459	48, 558	-5. 2	871, 754	-2. 8
Massachusetts.....	7, 848	322, 051	-2. 4	7, 020, 950	-4. 1	1, 081	156, 146	-5. 1	2, 392, 984	-6. 9
Michigan.....	1, 491	276, 834	-1. 4	6, 203, 596	-9. 4	406	188, 194	+0. 4	4, 256, 285	-8. 4
Minnesota.....	1, 009	61, 321	+0. 5	1, 336, 840	-2. 8	282	30, 821	+ ⁽⁵⁾	640, 989	-1. 7
Mississippi.....	402	8, 945	-2. 0	113, 058	-6. 4	78	4, 493	-8. 7	47, 814	-12. 2
Missouri.....	1, 103	97, 314	-2. 2	2, 070, 245	-4. 0	524	53, 006	-3. 4	1, 016, 959	-5. 3
Montana.....	310	5, 608	-4. 5	123, 481	-5. 3	49	1, 935	-11. 8	40, 701	-8. 5
Nebraska.....	716	21, 659	-1. 8	499, 685	-4. 8	135	10, 559	-3. 3	242, 877	-6. 9
Nevada.....	136	1, 723	+0. 6	45, 787	-0. 4	23	292	-1. 4	8, 847	-5. 5
New Hampshire.....	460	28, 872	-2. 9	456, 113	-5. 1	192	25, 127	-2. 9	364, 836	-5. 8
New Jersey.....	1, 480	179, 909	-2. 3	4, 106, 155	-2. 8	⁶ 711	166, 112	-1. 4	3, 632, 737	-3. 0
New Mexico.....	172	4, 332	-3. 6	78, 069	+0. 8	23	234	-5. 6	4, 971	-5. 5
New York.....	1, 689	300, 128	-3. 1	6, 722, 247	-4. 8	⁷ 1, 637	292, 301	-3. 4	6, 494, 773	-5. 0
North Carolina.....	893	90, 426	-4. 6	988, 987	-8. 2	558	85, 623	-4. 7	908, 660	-8. 5
North Dakota.....	263	3, 719	+1. 0	85, 063	-1. 8	57	1, 221	+2. 5	30, 646	-0. 5
Ohio.....	4, 602	354, 688	-2. 1	6, 811, 638	-5. 7	1, 963	264, 158	-3. 4	4, 861, 232	-6. 4
Oklahoma.....	702	24, 532	-1. 9	543, 363	-4. 6	126	8, 554	-0. 6	183, 657	-4. 1
Oregon.....	698	28, 881	+5. 0	565, 165	-1. 4	170	15, 273	+1. 8	271, 266	-1. 8
Pennsylvania.....	4, 135	563, 896	-5. 2	9, 685, 294	-12. 3	1, 755	314, 044	-2. 8	4, 731, 227	-4. 5
Rhode Island.....	908	45, 260	-2. 7	828, 858	-3. 4	277	33, 814	-3. 2	551, 479	-4. 3
South Carolina.....	318	34, 227	-18. 4	326, 724	-21. 7	174	30, 650	-20. 1	267, 671	-24. 3
South Dakota.....	162	5, 412	-0. 1	128, 104	-4. 2	48	1, 971	-0. 4	38, 665	-7. 8
Tennessee.....	753	56, 453	-6. 2	761, 146	-9. 1	290	39, 866	-7. 6	498, 457	-11. 5
Texas.....	706	53, 603	+0. 6	1, 245, 148	- ⁽⁸⁾	527	27, 814	+0. 6	576, 467	-0. 2
Utah.....	335	11, 600	+ ⁽⁹⁾	213, 656	-4. 9	89	3, 272	+2. 1	58, 689	-7. 1
Vermont.....	360	8, 903	-3. 0	173, 518	-10. 4	119	4, 434	-3. 5	83, 298	-15. 3
Virginia.....	1, 269	68, 291	-9. 0	1, 072, 348	-10. 8	450	48, 213	-11. 6	718, 287	-13. 1
Washington.....	1, 072	48, 563	+1. 1	1, 013, 433	-3. 9	267	23, 492	+1. 1	432, 110	-4. 2
West Virginia.....	729	78, 113	-3. 7	1, 203, 797	-11. 7	186	30, 313	-4. 9	526, 669	-12. 6
Wisconsin.....	⁸ 1, 099	125, 005	-0. 5	2, 099, 516	-6. 5	825	95, 458	-0. 5	1, 456, 886	- ⁹ 7. 1
Wyoming.....	186	5, 727	-1. 5	138, 978	-8. 4	27	1, 209	-3. 4	35, 753	-8. 0

¹ No change.² Includes building and contracting.³ Includes transportation and financial institutions.⁴ Includes building construction.⁵ Less than one-tenth of 1 per cent.⁶ Includes laundries.⁷ Includes laundering and cleaning.⁸ Does not include hotels.⁹ Weighted per cent of change, inclusive of canning.

COMPARISON OF EMPLOYMENT AND EARNINGS IN IDENTICAL ESTABLISHMENTS
IN MAY AND JUNE, 1932, BY STATES—Continued[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued
by cooperating State organizations]

State	Wholesale trade					Retail trade				
	Num- ber of estab- lish- ments	Num- ber on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change	Num- ber of estab- lish- ments	Num- ber on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change
Alabama.....	15	515	-2.5	\$14,676	-4.1	64	1,787	-3.8	\$26,728	-9.5
Arkansas.....	17	450	-5.1	12,808	-7.5	144	1,386	-0.5	24,747	-5.1
Arizona.....	20	179	-3.8	4,900	-12.1	186	1,417	-2.3	27,991	-6.6
California.....	71	4,956	-1.3	149,691	-3.3	96	25,353	-1.8	513,298	-4.9
Colorado.....	27	715	-0.6	21,876	-7.4	120	3,733	-2.9	75,827	-3.3
Connecticut.....	60	1,235	-0.9	36,412	-2.8	114	4,811	+1.2	99,463	-1.5
Delaware.....	10	172	+3.0	4,763	+1.3	15	174	-5.9	2,723	-6.8
Dist. of Columbia.....	25	338	-0.9	11,567	-2.6	402	10,160	-2.8	228,146	-3.2
Florida.....	45	652	-3.3	16,422	-4.4	73	900	-1.9	18,890	-3.4
Georgia.....	33	377	-1.8	10,629	-4.9	33	2,006	-0.1	34,540	-4.0
Idaho.....	6	82	(1)	2,321	-5.7	71	779	+14.1	14,033	-1.7
Illinois.....	13	694	+12.8	16,443	+7.4	63	18,003	-0.9	440,322	+3.0
Indiana.....	64	1,250	-2.6	32,390	-10.2	186	6,355	-0.5	117,830	-1.9
Iowa.....	35	1,056	+0.2	29,533	-7.8	127	3,325	-2.1	60,939	-3.6
Kansas.....	23	734	-4.2	22,706	-1.1	42	2,391	-0.1	46,430	-3.9
Kentucky.....	25	551	-13.8	12,464	-8.6	31	1,538	+0.1	24,580	-4.7
Louisiana.....	28	661	-1.2	15,421	-8.9	56	2,939	-1.0	44,749	-4.6
Maine.....	16	437	+3.6	10,049	+1.2	79	1,300	-3.1	24,149	-4.7
Maryland.....	34	828	+1.3	18,500	-2.2	39	4,729	-1.5	81,972	-3.4
Massachusetts.....	677	14,514	-0.1	400,065	-1.8	4,026	60,113	-1.0	1,273,299	-2.5
Michigan.....	60	1,511	+0.3	46,598	-6.7	210	11,375	-2.2	236,246	-4.2
Minnesota.....	60	3,852	-0.7	111,749	-2.4	287	7,862	+0.7	140,958	-4.6
Mississippi.....	5	125	(1)	2,359	-4.5	77	449	-3.2	5,764	-2.9
Missouri.....	53	4,835	-1.6	118,124	-8.2	135	5,977	-5.0	125,057	-3.4
Montana.....	14	232	-1.3	7,166	-5.0	91	913	+3.9	19,844	-5.1
Nebraska.....	35	919	-4.1	26,355	-7.0	195	1,592	-0.4	31,902	-5.6
Nevada.....	6	84	+5.0	3,247	-3.2	37	307	+2.7	8,205	+2.1
New Hampshire.....	14	157	-1.9	4,388	-3.7	65	598	-0.5	11,091	-5.5
New Jersey.....	28	597	-0.2	19,050	-1.6	432	7,566	-2.3	171,583	-4.0
New Mexico.....	10	118	+2.6	4,359	+7.5	40	238	(1)	5,283	-1.8
New York.....	179	5,498	-1.2	182,712	-1.7	406	44,458	-1.9	1,057,774	-3.9
North Carolina.....	19	295	-0.3	7,223	-5.8	177	594	-0.3	12,145	+0.2
North Dakota.....	16	230	-0.4	6,905	-3.7	40	433	-0.5	7,017	-5.8
Ohio.....	226	4,827	+0.7	128,822	-3.6	1,463	30,471	-4.0	604,121	-4.3
Oklahoma.....	45	750	-1.2	22,149	-6.7	121	1,758	-4.9	33,086	-10.8
Oregon.....	60	1,408	-2.2	40,393	-8.0	201	2,357	-9.4	47,379	-18.8
Pennsylvania.....	139	3,471	-1.7	93,766	-6.7	334	26,881	-0.6	544,416	-1.7
Rhode Island.....	45	1,033	-2.6	26,030	-4.0	506	4,897	-2.4	108,522	-3.1
South Carolina.....	18	253	-8.0	6,111	-5.9	15	420	-2.3	4,110	-6.6
South Dakota.....	10	129	-1.5	3,821	-6.7	20	338	+4.3	5,246	-4.7
Tennessee.....	35	666	+0.2	15,450	-2.6	66	3,515	-1.3	55,989	-4.5
Texas.....	112	2,123	-0.3	59,808	-3.4	83	6,221	-1.5	118,645	-5.2
Utah.....	16	496	(1)	12,363	-2.4	82	573	+5.5	13,066	-2.7
Vermont.....	5	119	+7.2	2,974	+3.8	47	494	-3.9	8,673	-3.1
Virginia.....	51	1,031	-16.9	25,492	-9.9	495	4,782	-2.1	93,767	-3.0
Washington.....	98	2,265	-1.8	64,913	-8.1	345	6,139	-2.1	118,504	-4.4
West Virginia.....	39	643	+2.6	18,921	-3.8	47	916	-1.1	16,870	-10.9
Wisconsin.....	45	1,935	-3.2	43,638	-9.5	51	7,996	-4.2	126,246	-7.6
Wyoming.....	8	56	+1.8	1,854	-1.9	46	229	+5.0	5,762	-3.9

1 No change.

COMPARISON OF EMPLOYMENT AND EARNINGS IN IDENTICAL ESTABLISHMENTS
IN MAY AND JUNE, 1932, BY STATES—Continued[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued
by cooperating State organizations]

State	Quarrying and nonmetallic mining					Metalliferous mining				
	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change
Alabama.....	7	283	-10.7	\$2,707	-25.9	6	716	-30.6	\$4,400	-51.5
Arkansas.....	9	114	-28.7	1,423	-20.0					
Arizona.....						13	2,844	-18.4	66,958	-29.0
California.....	29	631	-0.8	13,114	-13.5	18	1,328	+0.3	36,012	-5.1
Colorado.....	3	21	+23.5	225	-21.9	15	713	+5.6	19,879	-2.7
Connecticut.....	9	126	-38.8	2,193	-40.2					
Delaware.....										
Dist. of Columbia.....										
Florida.....	6	564	(¹)	6,591	-4.2					
Georgia.....	19	1,043	-3.3	11,278	-3.0					
Idaho.....						11	1,579	-21.7	38,420	-18.3
Illinois.....	23	611	+9.7	10,265	-5.4					
Indiana.....	32	1,651	+2.3	28,794	-2.2					
Iowa.....	17	346	+24.0	5,944	+25.2					
Kansas.....	20	962	+3.9	22,401	+10.6	8	309	-25.2	3,407	-27.7
Kentucky.....	28	685	-5.4	4,871	-6.1					
Louisiana.....	4	464	-2.5	5,032	-9.8					
Maine.....	5	58	-3.3	1,573	+2.9					
Maryland.....	17	450	-9.5	6,830	+1.4					
Massachusetts.....	16	381	-13.4	8,690	-21.7					
Michigan.....	22	616	-37.4	10,270	-24.9	35	4,650	-19.0	54,814	-16.0
Minnesota.....	6	187	+13.3	3,223	-7.2	33	617	-1.9	9,829	+14.2
Mississippi.....	3	57	+29.5	735	+81.0					
Missouri.....	13	212	-4.9	3,194	+0.1	11	1,031	-0.3	20,694	+2.0
Montana.....	4	17	-15.0	251	-39.4	14	43	+30.3	922	+13.3
Nebraska.....	3	132	+5.6	2,314	-2.3					
Nevada.....						15	357	+9.2	8,503	-9.5
New Hampshire.....	10	134	-0.7	3,632	+2.3					
New Jersey.....	3	42	-16.0	1,550	-4.0	3	28	-57.6	573	-36.0
New Mexico.....						4	854	+2.0	16,010	+3.2
New York.....	43	2,062	+1.8	41,249	-5.5					
North Carolina.....	7	85	-28.0	1,004	-31.6					
North Dakota.....										
Ohio.....	63	1,695	(¹)	30,272	-10.0					
Oklahoma.....	4	61	-4.7	727	-17.3	28	307	-57.8	5,783	-52.2
Oregon.....						4	114	+16.3	2,698	+18.0
Pennsylvania.....	60	2,943	-2.2	33,755	-14.5					
Rhode Island.....										
South Carolina.....	7	167	+9.9	905	-30.0					
South Dakota.....	3	14	-39.1	321	-47.0					
Tennessee.....	20	918	-7.9	13,580	-7.2	4	245	-7.9	2,776	-13.2
Texas.....	22	915	+43.2	18,053	+32.9					
Utah.....						11	2,197	-7.6	39,926	-7.8
Vermont.....	39	2,254	-4.7	47,239	-7.9					
Virginia.....	18	1,001	+1.7	10,460	+0.4					
Washington.....	7	173	+3.6	4,318	+3.9					
West Virginia.....	7	411	-14.2	4,196	-11.6					
Wisconsin.....	13	191	+44.7	2,906	+53.4					
Wyoming.....										

¹ No change.

COMPARISON OF EMPLOYMENT AND EARNINGS IN **IDENTICAL** ESTABLISHMENTS
IN MAY AND JUNE, 1932, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Bituminous coal mining					Crude petroleum producing				
	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change
Alabama.....	41	7,148	-16.9	\$52,776	-28.1					
Arkansas.....	5	55	+1.8	581	-1.1	8	195	+2.6	\$4,684	-3.2
Arizona.....										
California.....						39	5,314	-2.2	178,929	-7.6
Colorado.....	37	3,332	-7.0	42,284	+0.6					
Connecticut.....										
Delaware.....										
Dist. of Columbia.....										
Florida.....										
Georgia.....										
Idaho.....										
Illinois.....	23	1,047	+16.5	18,889	-4.4	9	181	-5.2	4,028	-1.3
Indiana.....	39	2,324	-10.3	47,948	-14.6	4	29	+16.0	500	+14.9
Iowa.....	21	2,103	-4.6	35,245	-5.9					
Kansas.....	14	1,457	-10.2	21,150	-14.1	33	1,143	-2.3	29,036	-0.1
Kentucky.....	144	23,203	+0.1	265,948	-7.2	6	173	-1.7	3,502	+6.2
Louisiana.....						8	164	+1.9	4,518	-1.9
Maine.....										
Maryland.....	14	1,313	+3.1	7,334	-17.5					
Massachusetts.....										
Michigan.....										
Minnesota.....										
Mississippi.....										
Missouri.....	16	920	+10.2	16,400	+9.0					
Montana.....	8	799	-4.0	16,147	-2.0	5	41	-8.9	1,140	-5.6
Nebraska.....										
Nevada.....										
New Hampshire.....										
New Jersey.....										
New Mexico.....	13	1,752	-6.0	25,690	+2.3	4	42	-6.7	1,555	+1.8
New York.....						4	87	+3.6	2,479	-7.4
North Carolina.....										
North Dakota.....										
Ohio.....	42	2,088	-14.6	36,021	-12.8	6	78	+23.8	1,297	+10.2
Oklahoma.....	14	365	+6.4	5,021	+14.5	66	4,557	-1.0	126,188	-2.9
Oregon.....										
Pennsylvania.....	366	51,664	-2.1	570,257	-11.0	21	428	+6.5	10,353	+0.4
Rhode Island.....										
South Carolina.....										
South Dakota.....										
Tennessee.....	16	2,612	-7.6	20,202	-13.6					
Texas.....						5	6,279	-1.6	256,860	+2.5
Utah.....	12	1,499	-1.7	24,734	-6.8					
Vermont.....										
Virginia.....	26	3,734	-1.3	30,785	-13.1					
Washington.....	10	1,176	-3.4	27,163	-8.4					
West Virginia.....	255	37,304	-2.8	437,655	-12.8	9	351	+0.3	8,837	-0.7
Wisconsin.....										
Wyoming.....	31	3,266	-1.9	73,268	-10.5	7	164	+3.8	4,382	-7.1

TREND OF EMPLOYMENT

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COMPARISON OF EMPLOYMENT AND EARNINGS IN IDENTICAL ESTABLISHMENTS
IN MAY AND JUNE, 1932, BY STATES—Continued[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued
by cooperating State organizations]

State	Public utilities					Hotels				
	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change
Alabama.....	123	2,006	-2.4	\$44,266	-2.2	28	1,233	-2.2	\$11,493	-3.5
Arkansas.....	49	1,178	-10.7	31,119	-4.3	17	906	-2.1	10,896	-4.0
Arizona.....	68	1,468	-2.8	39,276	-1.3	13	338	-8.2	5,423	-8.6
California.....	42	49,697	-3.0	1,439,045	+0.3	242	10,460	-0.9	176,280	-3.0
Colorado.....	196	5,740	-1.4	156,961	-4.0	31	1,180	+5.3	18,175	+0.5
Connecticut.....	134	10,139	-0.7	326,440	-2.6	32	1,228	-0.2	16,570	-3.4
Delaware.....	28	1,106	+0.6	29,929	+1.0	5	256	-3.4	2,993	-12.7
Dist. of Columbia..	21	8,334	+0.2	246,781	-1.3	51	4,013	-10.2	61,618	-11.8
Florida.....	183	4,279	-1.7	115,900	-2.3	37	624	-19.4	6,954	-24.4
Georgia.....	184	7,127	-2.7	207,838	-4.2	33	1,524	-14.7	12,609	-22.4
Idaho.....	57	729	-1.6	15,234	+0.6	14	246	-11.8	3,574	-4.6
Illinois.....	62	68,969	-1.7	2,055,514	-2.2	10 52	8,589	+2.1	144,190	-3.0
Indiana.....	132	10,073	-2.3	256,911	-6.4	58	2,734	-2.4	33,481	-7.9
Iowa.....	377	10,031	-1.0	240,557	-4.0	52	2,028	-8.8	21,741	-7.9
Kansas.....	24	7,199	-0.6	180,460	+0.6	21	579	-4.5	6,518	-6.8
Kentucky.....	303	7,310	-(5)	173,609	-1.9	37	1,829	-10.8	20,598	-16.6
Louisiana.....	153	4,513	-2.2	110,673	-2.7	20	1,828	-5.5	21,076	-9.6
Maine.....	173	2,863	-2.9	81,030	+0.3	27	935	+13.9	13,320	+10.4
Maryland.....	92	15,117	+9.2	378,066	-0.1	22	805	+0.8	10,841	-4.7
Massachusetts.....	11 138	47,015	-1.8	1,394,883	-4.1	105	5,685	+2.8	85,605	-2.1
Michigan.....	416	24,399	-1.3	725,172	-2.3	71	4,391	-2.1	62,119	-4.4
Minnesota.....	234	13,198	+0.2	363,137	-4.8	61	3,002	-0.5	40,031	-2.6
Mississippi.....	202	2,413	+0.2	45,354	-3.1	20	581	+0.5	4,819	-5.1
Missouri.....	220	23,622	+0.4	660,336	-1.9	76	4,418	-3.3	57,000	-4.1
Montana.....	87	960	+0.3	25,337	-2.5	18	263	-2.6	4,263	-3.8
Nebraska.....	298	5,881	-0.5	159,740	-1.9	32	1,434	-4.1	16,798	-6.1
Nevada.....	39	443	+8.8	12,398	+5.0	12	184	+23.5	3,264	+24.2
New Hampshire.....	144	2,191	-5.4	62,890	-2.1	17	343	+11.7	4,191	+5.1
New Jersey.....	278	24,177	-0.7	754,937	-2.4	79	4,973	-5.1	69,552	-4.2
New Mexico.....	56	539	-8.8	12,708	-3.4	15	308	-0.3	3,611	+2.4
New York.....	913	112,022	-0.8	3,514,273	-1.9	279	30,802	-3.2	508,053	-5.4
North Carolina.....	77	1,820	-0.4	38,633	-2.6	38	1,152	-9.8	11,499	-10.3
North Dakota.....	117	1,189	+1.6	31,404	-1.6	20	386	-2.3	4,514	-2.5
Ohio.....	475	33,077	-0.2	878,651	-3.2	168	9,662	-2.5	133,217	-4.9
Oklahoma.....	247	6,495	+1.3	147,072	-2.2	35	768	+0.1	7,529	-3.4
Oregon.....	189	5,870	+0.3	156,117	-0.2	39	1,080	(1)	16,057	-3.1
Pennsylvania.....	700	53,558	-0.2	1,562,379	-2.8	188	10,702	-0.1	145,204	-3.1
Rhode Island.....	35	3,648	+0.5	109,851	+0.9	18	403	-1.5	5,722	-5.8
South Carolina.....	79	1,637	-9.6	39,161	-9.1	14	435	-2.2	3,361	-14.3
South Dakota.....	58	919	-1.9	24,859	-6.0	15	330	+3.4	4,319	+5.9
Tennessee.....	251	5,076	-1.7	119,714	-2.6	41	2,275	-1.0	21,367	-4.2
Texas.....	106	6,738	+1.5	190,879	+0.1	54	3,613	-0.6	44,436	-2.5
Utah.....	69	1,936	+1.4	40,747	-0.8	14	535	-0.2	8,078	-3.5
Vermont.....	118	978	-3.5	23,861	-4.4	22	495	+8.1	5,638	+2.6
Virginia.....	152	5,934	-1.1	150,802	-6.2	35	2,213	-3.1	25,538	-8.1
Washington.....	204	10,143	-0.9	286,082	-4.0	58	2,137	-0.7	28,906	-3.2
West Virginia.....	118	6,179	-2.7	165,782	-6.4	41	1,183	-7.7	13,783	-7.2
Wisconsin.....	12 41	11,088	+0.1	323,894	-1.8	10 44	1,389	+6.8	(12)	-----
Wyoming.....	47	452	+0.9	11,663	-0.8	11	181	+2.8	2,706	-2.5

1 No change.

2 Less than one-tenth of 1 per cent.

3 Includes restaurants.

4 Includes steam railroads.

5 Includes steam railways and express.

6 Data not supplied.

COMPARISON OF EMPLOYMENT AND EARNINGS IN IDENTICAL ESTABLISHMENTS
IN MAY AND JUNE, 1932, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Laundries					Dyeing and cleaning				
	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change	Number of establishments	Number on pay roll, June, 1932	Per cent of change	Amount of pay roll (1 week), June, 1932	Per cent of change
Alabama	5	532	-4.5	\$5,596	-3.9	4	164	-1.8	\$1,992	-2.5
Arkansas	19	509	+0.4	5,207	-0.2					
Arizona	9	399	-2.9	6,252	-7.9					
California	76	5,864	-1.1	113,089	-4.1					
Colorado	10	783	-1.5	12,374	-3.5	10	145	-2.0	3,069	-2.6
Connecticut	27	1,374	-1.6	24,780	-1.3	7	208	+0.5	5,285	-(9)
Delaware	4	313	(1)	4,985	-1.3	4	47	+2.2	840	+4.5
Dist. of Columbia	21	2,284	+1.9	38,513	-0.5	5	118	+7.3	2,535	+7.0
Florida	7	396	+0.5	4,337	-2.4	4	37	-7.5	536	-9.5
Georgia	13	643	+1.4	6,380	+0.5	5	137	-2.1	1,663	-3.9
Idaho										
Illinois	14 22	1,577	-0.6	22,179	-(9)					
Indiana	19	1,611	-1.6	23,567	-6.9	11	199	-3.9	3,520	-7.6
Iowa	3	223	+2.8	3,792	+1.1					
Kansas	14 27	813	-3.0	12,266	-3.5					
Kentucky	18	843	-1.3	11,419	-4.1	5	235	-0.4	3,618	-8.5
Louisiana										
Maine	22	491	+0.8	7,475	-2.2					
Maryland	23	1,635	+0.6	28,505	+4.4	13	208	+6.7	3,578	+4.0
Massachusetts	103	3,652	+4.1	64,129	+1.4	121	1,988	+2.3	39,959	+2.3
Michigan	24	1,729	-0.9	24,215	-5.4	19	727	+0.3	16,087	-2.8
Minnesota	16	865	+0.8	15,022	-2.8	9	276	-2.1	5,181	-6.0
Mississippi	5	321	(1)	3,200	-0.9					
Missouri	32	2,553	-1.4	37,859	-2.1	14	427	+4.1	8,266	+1.6
Montana	15	351	-2.2	6,724	-5.7	3	24	-4.0	489	+1.0
Nebraska	10	764	-0.5	13,470	+2.9	5	151	-1.3	3,494	-1.5
Nevada	4	56	-5.1	1,323	-3.1					
New Hampshire	16	298	+2.8	4,676	-0.5					
New Jersey	28	3,049	+2.0	65,160	-0.2	9	380	+8.3	10,789	-0.3
New Mexico	5	235	-0.4	3,624	-1.0					
New York	69	7,102	+(9)	131,813	-1.2	18	630	+2.1	13,972	-1.0
North Carolina	13	787	-0.6	9,081	-0.8	3	50	(1)	592	-14.3
North Dakota	11	235	-0.4	4,097	-1.5					
Ohio	82	4,688	-1.5	77,152	-6.1	42	1,716	-0.8	32,002	-7.8
Oklahoma	8	625	-2.3	8,403	-2.5	6	225	-3.0	3,171	-3.3
Oregon						4	38	-5.0	877	-8.6
Pennsylvania	47	3,542	-1.6	57,397	-3.2	25	1,199	+0.4	23,415	-3.4
Rhode Island	20	1,141	+0.7	20,952	-1.1	5	290	-0.3	5,771	+2.2
South Carolina	8	294	+2.4	2,963	-1.0	4	72	-2.7	1,119	-3.9
South Dakota	6	141	-1.4	2,303	-1.0					
Tennessee	14	1,024	-2.8	10,182	-1.7	7	72	+5.9	1,014	+1.5
Texas	19	932	+2.6	10,905	-3.1	18	357	(1)	6,471	-0.2
Utah	5	507	-2.3	7,079	-5.6	6	65	-4.4	1,155	-8.6
Vermont	6	88	+4.8	1,081	+5.3	3	26	(1)	523	+0.8
Virginia	12	883	-0.8	10,308	-1.7	24	336	+1.5	5,211	+4.3
Washington	16	760	-2.8	16,957	-4.2	13	175	-1.1	3,634	-2.3
West Virginia	19	636	-4.9	8,322	-11.5	8	177	+1.1	2,762	-5.8
Wisconsin	14 26	955	-1.3	15,000	-2.1					
Wyoming	5	113	-1.7	2,202	-6.0					

1 No change.

2 Less than one-tenth of 1 per cent.

14 Includes dyeing and cleaning.

Employment and Pay Roll in June, 1932, in Cities of Over 500,000 Population

IN THE following table are presented the fluctuations in employment and earnings in June, 1932, as compared with May, 1932, for 13 cities of the United States having a population of 500,000 or over. These fluctuations are based on reports received from identical establishments in each of the months considered.

These city tabulations include all establishments reporting in all of the industrial groups, except building construction in these 13 cities, and also additional employment information secured from banks, insurance companies, garages, and other establishments in these 13 cities. Building-construction data are not included in these totals, as information is not available for all cities at this time.

FLUCTUATIONS IN EMPLOYMENT AND EARNINGS IN JUNE, 1932, AS COMPARED WITH MAY, 1932

Cities	Number of establishments reporting in both May and June, 1932	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		May, 1932	June, 1932		May, 1932	June, 1932	
New York City	1,846	290,257	281,050	-3.2	\$8,216,866	\$7,868,074	-4.2
Chicago, Ill.	1,839	159,589	197,681	-1.0	4,988,831	4,799,824	-3.8
Philadelphia, Pa.	682	112,845	109,623	-2.9	2,457,286	2,374,394	-3.4
Detroit, Mich.	560	188,502	191,620	+1.7	5,080,580	4,745,899	-6.6
Los Angeles, Calif.	566	55,026	54,012	-1.8	1,400,076	1,338,747	-4.4
Cleveland, Ohio	1,001	78,100	77,641	-0.6	1,731,956	1,619,356	-6.5
St. Louis, Mo.	498	64,858	62,926	-3.0	1,423,465	1,368,929	-3.8
Baltimore, Md.	573	47,323	46,790	-1.1	968,055	958,098	-1.0
Boston, Mass.	2,508	85,288	83,560	-2.0	2,178,046	2,098,602	-3.6
Pittsburg, Pa.	328	48,968	49,681	+1.5	1,000,526	993,131	-0.1
San Francisco, Calif.	890	40,535	40,353	-0.4	1,043,171	991,828	-4.9
Buffalo, N. Y.	273	38,191	36,239	-5.1	915,072	854,889	-6.6
Milwaukee, Wis.	467	37,352	36,276	-2.9	776,892	723,189	-6.9

Employment in Executive Civil Service of the United States, June, 1932

THE table following shows, for the months of June, 1931, and May and June, 1932, the number of officers and employees of the executive civil service of the United States Government. The figures are complete except for temporary employees in the field service of the Post Office Department, the number of which varies greatly, mainly because of seasonal demand. The principal need for such workers is during the Christmas mail rush. Their term of service is usually quite brief.

As indicated by the title of this article, the figures do not include the legislative, judicial, or Army and Navy services. The data are compiled by the various Federal departments and offices and sent to the United States Civil Service Commission, where they are assembled. They are published here by courtesy of the commission and in compliance with the direction of Congress. No information has yet been collected relative to the amounts of pay rolls. Because of the importance of Washington as a Government center the figures for the District of Columbia are shown separately and included in the total for the entire service.

At the end of June, 1932, there were 578,231 employees in the executive civil service of the United States. Of this number, 542,354

were permanent and 35,877 were temporary employees. In the interval between June 30, 1931, and June 30, 1932, there was a gain of 7,312 permanent employees but a loss of 9,215 temporary employees, making a loss of 1,903 employees in the entire civil service or 0.3 per cent. Comparing the number of employees on the pay roll on June 30, 1932, with those on the pay roll on May 31, 1932, there was a loss of 1,435 permanent employees but a gain of 3,290 temporary employees, resulting in a net gain of 1,855 employees or 0.3 per cent.

The number of employees in the District of Columbia showed a decrease of 582 comparing June, 1932, with May, 1932, and a loss of 2,832 comparing June, 1932, with June, 1931.

During the month of June, 1932, 21,818 employees were hired in the entire Federal service and 19,963 employees separated from the service on account of resignation, termination of appointment, death, retirement, or other causes. This gives a net turnover rate of 3.46 per cent for the month.

The turnover rate for the District of Columbia was less than one-third that for the entire country. On June 30, 1932, there were 68,793 employees on the Government pay roll in the District of Columbia. Of this number 65,619 were permanent and 3,174 were temporary workers.

EMPLOYEES IN THE EXECUTIVE CIVIL SERVICE OF THE UNITED STATES, JUNE, 1931, MAY AND JUNE, 1932¹

Item	District of Columbia			Outside District			Entire service		
	Perma- nent	Tempo- rary ²	Total	Perma- nent	Tempo- rary ²	Total	Perma- nent	Tempo- rary ²	Total
Number of employees—									
June, 1931.....	64,204	7,421	71,625	470,838	37,671	508,509	535,042	45,092	580,134
May, 1932.....	66,062	3,313	69,375	477,727	29,274	507,001	543,789	32,587	576,376
June, 1932.....	65,619	3,174	68,793	476,735	32,703	509,438	542,354	35,877	578,231
Gain or loss—									
June, 1931-June, 1932.....	+1,415	-4,247	-2,832	+5,897	-4,968	+929	+7,312	-9,215	-1,903
May, 1932-June, 1932.....	-443	-139	-582	-992	+3,429	+2,437	-1,435	+3,290	+1,855
Per cent of change—									
June, 1931-June, 1932.....	+2.2	-57.2	-4.0	+1.3	-13.2	+2	+1.4	-20.4	-3
May, 1932-June, 1932.....	-.7	-4.2	-.8	-.2	+11.7	+5	-.3	+10.1	+3
Labor turnover, June, 1932—									
Additions.....	423	286	709	2,368	18,741	21,109	2,791	19,027	21,818
Separations.....	866	425	1,291	3,360	15,312	18,672	4,226	15,737	19,963
Turnover rate.....	0.64	8.82	1.03	0.50	49.41	3.67	0.51	45.97	3.46

¹ Certain revisions have been made from time to time by the Civil Service Commission by dropping certain classes of employees previously carried in the tabulations. Thus, in the District of Columbia 68 mail contractors and special delivery messengers were eliminated from the enumeration in May, 1932; and in the service outside the District 35,800 star-route and other contractors, clerks in charge of mail-contract stations, clerks in third-class post offices, and special delivery messengers were eliminated in April, 1932, and 835 collaborators of the Department of Agriculture in June, 1932. In the table, in order to make the figures comparable for all the months shown, it was assumed that the number of these employees was the same in May, 1932, and June, 1931, as in the month they were dropped from the tabulation (actual figures not being available from the Civil Service Commission), and the data for those months have been revised in this table accordingly.

² Not including the field service of the Post Office Department.

Employment in Building Construction in June, 1932

EMPLOYMENT in building construction decreased 1.8 per cent in June as compared with May. Earnings decreased 2.3 per cent during the same period. These per cents are based on information received from 10,349 firms engaged on building operations in 34 States and the District of Columbia.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE BUILDING CONSTRUCTION INDUSTRY IN IDENTICAL FIRMS, MAY AND JUNE, 1932

Locality	Number of firms reporting	Number on pay roll week ending near—		Per cent of change	Amount of pay roll week ending near—		Per cent of change
		May 15	June 15		May 15	June 15	
Alabama: Birmingham.....	72	420	494	+17.6	\$6,381	\$7,750	+21.5
California:							
Los Angeles ¹	26	1,203	1,337	+11.1	24,969	29,278	+17.3
San Francisco-Oakland ¹	29	890	790	-11.2	14,487	19,205	-21.6
Other reporting localities ¹	26	609	648	+6.4	14,453	16,437	+13.7
Colorado: Denver.....	194	756	782	+3.4	19,073	21,060	+10.4
Connecticut:							
Bridgeport.....	138	653	630	-3.5	17,076	16,096	-5.7
Hartford.....	240	1,373	1,199	-12.7	38,091	32,343	-15.1
New Haven.....	201	1,462	1,497	+2.4	43,414	44,356	+2.2
Delaware: Wilmington.....	97	1,541	1,508	-2.1	33,804	35,255	+4.3
District of Columbia.....	561	7,577	6,891	-9.1	200,053	195,012	-2.5
Florida:							
Jacksonville.....	48	284	261	-8.1	4,380	3,662	-16.4
Miami.....	78	654	518	-20.8	13,713	9,922	-27.6
Georgia: Atlanta.....	125	1,103	1,135	+2.9	16,382	16,055	-2.0
Illinois:							
Chicago ¹	149	1,701	1,580	-7.1	49,591	44,930	-9.4
Other reporting localities ¹	69	649	661	+1.8	15,388	16,337	+6.2
Indiana:							
Fort Wayne.....	112	724	684	-5.5	15,610	15,069	-3.5
Indianapolis.....	157	963	1,076	+11.7	21,440	26,398	+23.1
South Bend.....	38	297	241	-18.9	6,312	4,394	-30.4
Iowa: Des Moines.....	101	401	377	-6.0	9,351	8,019	-14.2
Kansas: Wichita.....	57	224	214	-4.5	4,205	3,684	-12.4
Kentucky: Louisville.....	138	1,047	842	-19.6	22,801	17,317	-24.1
Louisiana: New Orleans.....	123	1,251	1,527	+22.1	23,576	24,255	+2.9
Maine: Portland.....	96	499	400	-19.8	12,977	10,255	-21.0
Maryland: Baltimore ¹	129	1,401	1,448	+3.4	28,932	30,702	+6.1
Massachusetts: All reporting localities ¹	752	7,133	6,984	-2.1	210,848	195,599	-7.2
Michigan:							
Detroit.....	453	2,723	2,440	-10.4	66,302	55,622	-16.1
Flint.....	36	125	125	(?)	2,361	2,263	-4.2
Grand Rapids.....	106	566	535	-5.5	9,525	10,377	+8.9
Minnesota:							
Duluth.....	54	258	200	-22.5	4,756	3,655	-23.1
Minneapolis.....	234	1,794	1,608	-10.4	45,910	42,211	-8.1
St. Paul.....	137	1,246	1,357	+8.9	31,723	33,749	+6.4
Missouri:							
Kansas City ¹	226	2,029	1,935	-4.6	56,908	53,764	-5.5
St. Louis.....	436	2,112	2,277	+7.8	62,858	65,625	+4.4
Nebraska: Omaha.....	138	880	932	+5.9	20,947	19,581	-6.5
New York: New York City ¹	246	2,602	4,170	+60.3	75,495	139,780	+85.2
Other reporting localities ¹	152	3,457	3,561	+3.0	99,661	98,900	-0.8
North Carolina: Charlotte.....	38	238	261	+9.7	3,010	3,860	+28.2
Ohio:							
Akron.....	82	398	672	+68.8	7,455	13,443	+80.3
Cincinnati ¹	513	3,255	3,277	+0.7	95,022	93,398	-1.7
Cleveland.....	445	2,815	2,432	-13.6	77,346	67,338	-12.9
Dayton.....	119	414	440	+6.3	9,544	9,009	-5.6
Youngstown.....	47	178	218	+22.5	3,689	3,867	+4.8
Oklahoma:							
Oklahoma City.....	99	489	436	-10.8	8,877	7,676	-13.5
Tulsa.....	55	207	204	-1.4	3,610	3,525	-2.4
Oregon: Portland.....	193	1,021	1,107	+8.4	22,916	23,726	+3.5
Pennsylvania:							
Erie ¹	35	288	255	-11.5	7,324	6,839	-6.6
Philadelphia ¹	587	5,564	4,986	-10.4	134,434	120,323	-10.5
Pittsburgh ¹	273	1,969	1,506	-23.5	57,909	45,119	-22.1
Reading-Lebanon ¹	68	448	464	+3.6	8,594	8,746	+1.8
Scranton ¹	41	219	176	-19.6	5,223	3,765	-27.9
Other reporting localities ¹	276	2,205	2,236	+1.4	46,898	40,951	-12.7
Rhode Island: Providence.....	222	1,686	1,595	-5.4	44,191	41,602	-5.9
Tennessee:							
Knoxville.....	30	348	312	-10.3	6,094	4,295	-29.5
Memphis.....	95	535	565	+5.6	10,932	11,824	+8.2
Nashville.....	76	873	794	-9.0	17,780	15,755	-11.4

¹ Data supplied by cooperating State bureaus.² No change.³ Includes both Kansas City, Kans., and Kansas City, Mo.⁴ Includes Covington and Newport, Ky.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE BUILDING CONSTRUCTION INDUSTRY IN IDENTICAL FIRMS, MAY AND JUNE, 1932—Continued

Locality	Number of firms reporting	Number on pay roll week ending near—		Per cent of change	Amount of pay roll week ending near—		Per cent of change
		May 15	June 15		May 15	June 15	
Texas:							
Dallas.....	138	906	728	-19.6	\$14,307	\$12,465	-12.9
Houston.....	120	749	839	+12.0	13,705	14,659	+7.0
San Antonio.....	89	542	564	+4.1	9,739	8,578	-11.9
Utah: Salt Lake City.....	86	533	443	-16.9	10,958	9,366	-14.5
Virginia:							
Norfolk-Portsmouth.....	91	584	566	-3.1	11,909	10,979	-7.8
Richmond.....	145	1,063	970	-8.7	21,612	19,990	-7.5
Washington:							
Seattle.....	184	868	701	-19.2	21,638	15,652	-27.7
Spokane.....	45	148	161	+8.8	2,616	3,311	+26.6
Tacoma.....	71	189	135	-28.6	4,689	2,520	-46.3
West Virginia: Wheeling.....	49	256	259	+1.1	5,354	5,167	-3.5
Wisconsin: All reporting localities ¹	63	1,455	1,415	-2.8	35,427	31,571	-10.9
Total, all localities.....	10,349	83,050	81,581	-1.8	2,076,555	2,028,236	-2.3

¹ Data supplied by cooperating State bureaus.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to May, 1932, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the 12-month average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO MAY, 1932

[12-month average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
January.....	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3	73.7	61.2
February.....	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4	72.7	60.3
March.....	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5	72.9	60.5
April.....	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0	73.5	60.0
May.....	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6	73.9	59.7
June.....	137.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5	72.8	-----
July.....	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7	72.4	-----
August.....	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7	71.2	-----
September.....	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2	69.3	-----
October.....	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4	67.7	-----
November.....	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0	64.5	-----
December.....	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9	62.6	-----
Average.....	104.1	98.3	97.9	100.0	97.5	92.9	93.3	83.5	70.6	160.3

¹ Average for 5 months.

Table 2 shows the total number of employees on the 15th day each of May, 1931, and April and May, 1932, and the total pay roll for each of these months.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, MAY, 1931, AND APRIL AND MAY, 1932

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	May 15, 1931	Apr. 15, 1932	May 15, 1932	May, 1931	Apr., 1932	May, 1932
Professional, clerical, and general.....	227, 838	194, 336	189, 976	\$33, 616, 285	\$26, 105, 758	\$25, 478, 577
Clerks.....	124, 284	103, 759	101, 265	17, 251, 169	13, 126, 370	12, 774, 721
Stenographers and typists.....	21, 219	18, 394	17, 953	2, 780, 258	2, 205, 811	2, 142, 727
Maintenance of way and structures..	308, 317	219, 252	236, 757	27, 963, 239	17, 068, 340	17, 879, 653
Laborers, extra gang and work train.....	37, 276	15, 559	19, 975	2, 583, 532	843, 200	1, 069, 533
Laborers, tracks, and roadway section.....	164, 113	121, 333	134, 026	11, 087, 960	6, 612, 969	7, 175, 022
Maintenance of equipment and stores..	355, 740	298, 650	289, 654	44, 599, 187	31, 136, 637	30, 092, 461
Carmen.....	74, 062	60, 793	59, 116	10, 385, 232	7, 044, 418	6, 816, 206
Machinists.....	46, 916	41, 287	40, 392	6, 825, 478	4, 936, 818	4, 818, 253
Skilled trades helpers.....	78, 128	64, 856	62, 580	8, 172, 276	5, 475, 841	5, 285, 496
Laborers (shops, engine houses, power plants, and stores).....	29, 073	24, 022	23, 485	2, 701, 841	1, 873, 274	1, 846, 790
Laborers, common (shops, engine houses, power plants, and stores).....	38, 039	31, 430	30, 512	2, 783, 144	1, 881, 110	1, 794, 564
Transportation, other than train, engine, and yard.....	162, 283	138, 036	135, 992	20, 495, 068	15, 506, 609	15, 363, 076
Station agents.....	27, 768	26, 101	25, 962	4, 396, 355	3, 703, 665	3, 672, 341
Telegraphers, telephoners, and towermen.....	19, 850	17, 373	17, 270	3, 127, 198	2, 401, 123	2, 424, 877
Truckers (stations, warehouses, and platforms).....	24, 228	18, 755	18, 152	2, 198, 584	1, 469, 148	1, 401, 975
Crossing and bridge flagmen and gatemen.....	18, 996	18, 125	18, 127	1, 472, 853	1, 254, 031	1, 253, 899
Transportation (yardmasters, switch tenders, and hostlers).....	17, 937	15, 049	14, 535	3, 498, 946	2, 492, 497	2, 431, 750
Transportation, train and engine.....	249, 568	207, 201	200, 818	48, 959, 036	34, 159, 125	33, 481, 545
Road conductors.....	28, 491	23, 772	23, 213	6, 761, 511	4, 832, 558	4, 798, 484
Road brakemen and flagmen.....	54, 871	45, 401	44, 418	9, 237, 374	6, 363, 046	6, 273, 441
Yard brakemen and yard helpers.....	42, 227	35, 064	33, 691	6, 943, 799	4, 694, 863	4, 500, 488
Road engineers and motormen.....	33, 455	28, 003	27, 467	8, 947, 758	6, 360, 960	6, 281, 919
Road firemen and helpers.....	34, 136	28, 947	28, 098	6, 485, 153	4, 562, 737	4, 502, 715
All employees.....	1, 321, 683	1, 072, 524	1, 067, 732	179, 131, 761	126, 468, 966	124, 727, 062

RETAIL PRICES

Retail Prices of Food in June, 1932

THE following tables are compiled from simple averages of the actual selling prices received monthly by the Bureau of Labor Statistics of the United States Department of Labor from retail dealers.

Table 1 shows for 51 cities of the United States retail prices and index numbers of food on June 15, 1931, and May 15 and June 15, 1932. The index numbers are based on the average prices for the year 1913 as 100.0.

TABLE 1.—AVERAGE RETAIL PRICES AND INDEX NUMBERS OF FOOD IN THE UNITED STATES, JUNE 15, 1931, AND MAY 15 AND JUNE 15, 1932

Article	Unit	Average retail price on—			Index numbers (1913=100.0)		
		June 15, 1931	May 15, 1932	June 15, 1932	June 15, 1931	May 15, 1932	June 15, 1932
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>			
Sirloin steak.....	Pound.....	38.7	33.0	32.8	152.4	129.9	129.1
Round steak.....	do.....	33.7	28.4	28.4	151.1	127.4	127.4
Rib roast.....	do.....	28.3	23.8	23.5	142.9	120.2	118.7
Chuck roast.....	do.....	20.9	17.0	16.9	130.6	106.3	105.6
Plate beef.....	do.....	13.6	11.1	10.7	112.4	91.7	88.4
Pork chops.....	do.....	29.4	19.9	19.8	140.0	94.8	94.3
Bacon, sliced.....	do.....	36.9	23.9	23.2	136.7	88.5	85.9
Ham, sliced.....	do.....	45.9	35.4	34.9	170.6	131.6	129.7
Lamb, leg of.....	do.....	30.6	25.0	24.3	161.9	132.3	128.6
Hens.....	do.....	31.1	25.7	24.1	146.0	120.7	113.1
Salmon, red, canned.....	do.....	33.6	26.9	25.8			
Milk, fresh.....	Quart.....	12.0	10.8	10.8	134.8	121.3	121.3
Milk, evaporated.....	14½-oz. can.....	8.3	7.3	6.8			
Butter.....	Pound.....	30.9	25.1	24.1	80.7	65.5	62.9
Oleomargarine (all butter substitutes).....	do.....	19.0	15.1	14.9			
Cheese.....	do.....	26.5	22.5	22.3	119.9	101.8	100.9
Lard.....	do.....	13.0	8.3	7.8	82.3	52.5	49.4
Vegetable lard substitute.....	do.....	23.3	20.7	19.6			
Eggs, strictly fresh.....	Dozen.....	25.8	20.0	20.8	74.8	58.0	60.3
Bread.....	Pound.....	7.6	6.9	6.9	135.7	123.2	123.2
Flour.....	do.....	3.7	3.2	3.2	112.1	97.0	97.0
Corn meal.....	do.....	4.5	3.9	3.9	150.0	130.0	130.0
Rolled oats.....	do.....	8.0	7.6	7.6			
Corn flakes.....	8-oz. pkg.....	8.9	8.6	8.6			
Wheat cereal.....	28-oz. pkg.....	24.0	22.5	22.4			
Macaroni.....	Pound.....	16.9	15.4	15.4			
Rice.....	do.....	8.2	6.7	6.6	94.3	77.0	75.9
Beans, navy.....	do.....	8.0	5.1	5.0			
Potatoes.....	do.....	2.4	1.8	2.0	141.2	105.9	117.6
Onions.....	do.....	4.8	6.7	4.7			
Cabbage.....	do.....	4.0	6.6	5.4			
Pork and beans.....	16-oz. can.....	8.2	7.4	7.2			
Corn, canned.....	No. 2 can.....	13.3	10.8	10.6			
Peas, canned.....	do.....	13.9	12.9	12.8			
Tomatoes, canned.....	do.....	10.1	9.5	9.5			

TABLE 1.—AVERAGE RETAIL PRICES AND INDEX NUMBERS OF FOOD IN THE UNITED STATES, JUNE 15, 1931, AND MAY 15 AND JUNE 15, 1932—Continued

Article	Unit	Average retail price on—			Index numbers (1913=100.0)		
		June 15, 1931	May 15, 1932	June 15, 1932	June 15, 1931	May 15, 1932	June 15, 1932
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>			
Sugar.....	Pound.....	5.6	4.9	4.9	101.8	89.1	89.1
Tea.....	do.....	74.4	71.9	71.0	136.8	132.2	130.5
Coffee.....	do.....	33.1	30.0	29.7	111.1	100.7	99.7
Prunes.....	do.....	11.8	9.4	9.4			
Raisins.....	do.....	11.1	11.5	11.5			
Bananas.....	Dozen.....	26.1	23.2	22.9			
Oranges.....	do.....	37.6	33.0	33.5			
Weighted food index.....					118.3	101.3	100.1

Table 2 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years for 1913, 1920, 1928, 1929, 1930, 1931, and by months for 1931 and 1932. The articles included in these groups will be found in the May issue of this publication.

TABLE 2.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS, FOR THE UNITED STATES, BY YEARS, FOR 1913, 1920, 1928, 1929, 1930, AND BY MONTHS, 1931 AND 1932

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913.....	100.0	100.0	100.0	1931—Continued			
1920.....	232.1	185.7	185.1	August.....	132.0	149.1	111.9
1928.....	167.2	179.2	150.0	September.....	130.2	147.7	114.3
1929.....	164.1	188.4	148.6	October.....	129.8	142.7	117.0
1930.....	158.0	175.8	136.5	November.....	129.1	135.4	114.4
1931: Average for year.....	135.9	147.0	114.6	December.....	127.8	129.3	111.4
January.....	147.1	159.5	123.6	1932:			
February.....	144.6	153.4	120.2	January.....	126.4	123.4	106.5
March.....	142.4	152.5	120.5	February.....	125.0	117.3	102.9
April.....	138.9	151.4	116.5	March.....	124.3	118.9	101.9
May.....	137.7	149.3	110.3	April.....	122.9	118.6	97.4
June.....	136.3	145.7	108.3	May.....	122.6	115.3	94.3
July.....	134.3	147.8	109.6	June.....	122.5	113.5	92.6

Index Numbers of Retail Prices of Food in the United States

IN TABLE 3 index numbers are given which show the changes in the retail prices of specified food articles, and for all articles combined by years, for 1913, 1920, 1928, 1929, 1930, 1931, and by months for 1931 and 1932. These index numbers are based on the average for the year 1913 as 100.0.

TABLE 3.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920, 1928, 1929, 1930, 1931, AND BY MONTHS FOR 1931 AND 1932

[Average for year 1913=100.0]

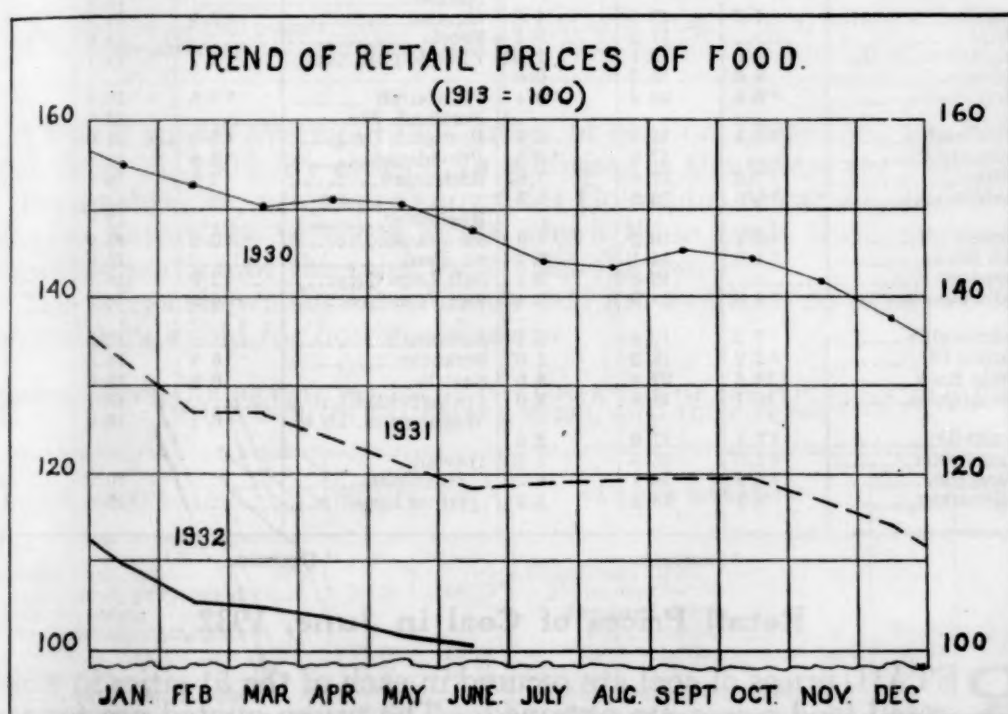
Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Lamb, leg of	Hens	Milk	Butter
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	207.9	209.9	187.6	183.0
1928.....	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	208.5	175.6	159.6	147.5
1929.....	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	212.2	186.4	160.7	143.9
1930.....	182.7	184.8	172.7	170.0	155.4	171.0	156.7	198.5	185.7	166.7	157.3	120.4
1931.....	155.1	154.3	146.0	134.4	118.2	138.6	134.8	170.6	156.1	145.5	138.2	92.4
January.....	167.3	168.2	159.1	152.5	138.0	141.9	148.9	188.1	166.1	153.5	149.4	98.4
February.....	161.4	161.0	154.0	145.6	131.4	131.4	145.2	183.3	164.6	148.8	146.1	94.8
March.....	158.7	157.8	153.0	141.9	128.1	140.0	143.0	178.4	164.0	150.2	144.9	97.4
April.....	157.5	156.5	150.0	139.4	124.8	141.4	141.1	175.5	165.6	153.1	141.6	91.9
May.....	155.5	154.7	147.0	135.6	119.8	143.3	139.3	172.9	165.1	148.8	138.2	81.5
June.....	152.4	151.1	142.9	130.6	112.4	140.0	136.7	170.6	161.9	146.0	134.8	80.7
July.....	154.3	154.3	142.9	130.0	110.7	151.4	137.0	171.4	158.7	144.6	136.0	82.8
August.....	155.5	155.2	143.9	130.0	109.9	158.6	135.6	171.4	156.6	145.1	136.0	89.8
September.....	155.1	154.3	142.9	130.6	111.6	153.3	134.1	169.5	152.4	145.1	136.0	96.1
October.....	152.0	150.7	141.4	129.4	111.6	139.5	127.0	164.3	145.5	140.4	134.8	104.2
November.....	146.9	144.8	137.9	126.3	109.9	119.0	118.9	155.4	138.1	137.1	134.8	97.4
December.....	142.9	140.4	134.8	122.5	108.3	103.8	112.2	147.6	131.7	134.3	130.3	95.3
1932:												
January.....	137.4	135.0	129.8	115.6	101.7	99.5	101.5	139.8	127.5	131.0	129.2	84.3
February.....	130.7	127.4	123.2	108.1	96.7	91.0	96.7	136.4	125.4	127.2	128.1	77.0
March.....	129.9	127.8	123.2	108.1	95.9	102.4	95.2	136.1	131.7	128.2	127.0	77.0
April.....	131.5	128.3	122.7	108.8	96.7	102.4	92.2	134.9	135.4	124.9	123.6	70.0
May.....	129.9	127.4	120.2	106.3	91.7	94.8	88.5	131.6	132.3	120.7	121.3	65.5
June.....	129.1	127.4	118.7	105.6	88.4	94.3	85.9	129.7	128.6	113.1	121.3	62.9

Year and month	Cheese	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota- toes	Sugar	Tea	Coffee	All ar- ticles ¹
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	188.2	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1928.....	174.2	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929.....	171.9	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1930.....	158.8	107.6	118.8	155.4	142.4	176.7	109.2	211.8	112.7	142.5	136.2	147.1
1931.....	127.1	84.2	91.9	135.7	109.0	153.3	94.3	135.3	103.6	138.6	113.4	121.3
January.....	145.2	99.4	104.6	146.4	121.2	170.0	102.3	170.6	107.3	141.0	126.8	132.8
February.....	141.2	91.8	78.8	142.9	121.2	166.7	102.3	158.8	107.3	140.6	125.2	127.0
March.....	137.1	89.9	82.6	141.1	118.2	166.7	98.9	158.8	105.5	139.7	121.8	126.4
April.....	132.6	89.9	79.4	137.5	115.2	163.3	96.6	164.7	103.6	138.2	116.1	124.0
May.....	124.0	85.4	71.9	137.5	112.1	152.3	95.4	164.7	101.8	136.9	112.4	121.0
June.....	119.9	82.3	74.8	135.7	112.1	150.0	94.3	141.2	101.8	136.8	111.1	118.3
July.....	118.6	82.3	82.9	133.9	109.2	150.0	93.1	135.3	101.8	137.3	109.1	119.0
August.....	119.9	81.0	92.5	132.1	103.0	150.0	93.1	129.4	103.6	138.6	108.7	119.7
September.....	122.2	79.8	98.0	130.4	100.0	150.0	92.0	117.6	103.6	139.3	108.7	119.4
October.....	122.6	78.5	109.9	130.4	100.0	146.7	89.7	105.9	101.8	139.0	107.7	119.1
November.....	121.3	77.2	115.1	130.4	100.0	140.0	86.2	100.0	101.8	138.1	106.7	116.7
December.....	118.6	70.9	111.6	128.6	100.0	136.7	85.1	105.9	100.0	138.1	105.7	114.3
1932:												
January.....	115.4	63.9	86.1	126.8	100.0	133.3	85.1	100.0	98.2	136.2	104.4	109.3
February.....	110.4	59.5	70.1	125.0	100.0	133.3	83.9	100.0	96.4	135.3	104.0	105.3
March.....	107.7	57.6	61.2	125.0	97.0	130.0	81.6	100.0	94.5	134.7	103.4	105.0
April.....	105.4	55.1	58.3	123.2	97.0	130.0	79.3	100.0	92.7	133.1	102.3	103.7
May.....	101.8	52.5	58.0	123.2	97.0	130.0	77.0	105.9	89.1	132.2	100.7	101.3
June.....	100.9	49.4	60.3	123.2	97.0	130.0	75.9	117.6	89.1	130.5	99.7	100.1

¹ 22 articles in 1913-1920; 42 articles in 1921-1932.

Comparison of Retail Food Costs in 51 Cities

TABLE 4 shows for 39 cities the percentage of increase or decrease in the retail cost of food in the United States in June, 1932, compared with the average cost in the year 1913, in June, 1931, and May, 1932. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average consumption of these articles in each city. The consumption figures which have been used since January, 1921, are given in the Labor Review for March, 1921 (p. 26). Those used for prior dates are given in the Labor Review for November, 1918, (pp. 94 and 95).



Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of June schedules were received from 99 per cent of the firms in the 51 cities from which retail prices of food are collected.

Out of about 1,213 food reports 16 were not received—1 each in Birmingham, Boston, Bridgeport, Cincinnati, Fall River, Newark, New Orleans, New York, Portland (Oreg.), and San Francisco; 2 each in Minneapolis, Philadelphia, and St. Louis.

Out of about 350 bread reports one was missing in Jacksonville.

A perfect record is shown for the following named cities: Atlanta, Baltimore, Buffalo, Butte, Charleston (S. C.), Chicago, Cleveland, Columbus, Dallas, Denver, Detroit, Houston, Indianapolis, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Mobile, New Haven, Norfolk, Omaha, Peoria, Pittsburgh, Portland (Me.), Providence, Richmond, Rochester, St. Paul, Salt Lake City, Savannah, Scranton, Seattle, Springfield (Ill.), and Washington.

TABLE 4.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN JUNE, 1932, COMPARED WITH THE COST IN MAY 1932, JUNE, 1931, AND WITH THE COST IN THE YEAR 1913, BY CITIES

City	Percent- age increase June, 1932, com- pared with 1913	Percentage decrease June, 1932, com- pared with—		City	Percent- age increase June, 1932, com- pared with 1913	Percentage decrease June, 1932, com- pared with—	
		June, 1931	May, 1932			June, 1931	May, 1932
United States	0.1	15.5	1.1	Minneapolis.....	¹ 0.7	17.9	0.8
Atlanta.....	0.1	16.4	0.6	Mobile.....		19.7	2.5
Baltimore.....	2.5	16.7	¹ 0.2	Newark.....	4.8	12.5	1.0
Birmingham.....	² 1.9	14.3	3.2	New Haven.....	7.4	13.1	1.3
Boston.....	² 0.1	16.9	0.5	New Orleans.....	² 4.2	14.6	3.5
Bridgeport.....		14.4	1.3	New York.....	8.7	13.0	1.2
Buffalo.....	4.7	13.5	1.8	Norfolk.....		13.2	0.9
Butte.....		17.2	0.3	Omaha.....	² 7.9	19.2	2.4
Charleston, S. C.....	4.6	15.1	1.8	Peoria.....		14.6	0.1
Chicago.....	8.3	16.5	0.6	Philadelphia.....	4.7	17.1	0.4
Cincinnati.....	² 0.6	20.9	¹ 0.4	Pittsburgh.....	² 2.8	18.8	1.0
Cleveland.....	² 4.1	15.4	0.8	Portland, Me.....		12.6	1.2
Columbus.....		17.3	¹ 0.5	Portland, Oreg.....	² 5.9	14.0	3.4
Dallas.....	² 7.6	17.6	5.8	Providence.....	2.9	12.8	0.4
Denver.....	² 6.6	13.9	1.3	Richmond.....	2.3	16.3	0.8
Detroit.....	² 4.4	19.2	¹ 1.9	Rochester.....		12.9	0.9
Fall River.....	² 1.6	14.1	2.2	St. Louis.....	² 0.2	17.6	2.0
Houston.....		16.8	0.1	St. Paul.....		16.9	1.8
Indianapolis.....	² 4.0	14.9	¹ 0.4	Salt Lake City.....	² 12.9	18.7	2.2
Jacksonville.....	² 7.2	17.6	¹ 0.1	San Francisco.....	4.9	13.2	2.2
Kansas City.....	² 2.2	18.3	1.0	Savannah.....		19.2	2.2
Little Rock.....	² 14.6	22.4	5.6	Scranton.....	6.9	14.8	1.7
Los Angeles.....	² 10.1	14.8	3.0	Seattle.....	0.8	13.6	1.9
Louisville.....	² 7.1	17.0	2.6	Springfield, Ill.....		15.7	1.4
Manchester.....	² 1.0	16.5	1.6	Washington, D. C.....	6.1	16.9	0.1
Memphis.....	² 7.9	16.1	4.7	Hawaii:			
Milwaukee.....	3.3	15.2	1.2	Honolulu.....		10.2	1.6
				Other localities.....		10.4	1.5

¹ Increase.² Decrease.

Retail Prices of Coal in June, 1932

RETAIL prices of coal are secured in each of the 51 cities in which retail food prices are obtained. The prices quoted are for coal delivered to consumers but do not include charges for storing the coal in cellar or bins where an extra handling is necessary.

Average prices for the United States for bituminous coal and for stove and chestnut sizes of Pennsylvania anthracite are computed from the quotations received from retail dealers in all cities where these coals are sold for household use.

Table 1 shows the average prices of coal per ton of 2,000 pounds and index numbers for the United States on June 15, 1932, in comparison with the average prices on June 15, 1931, and May 15, 1932, together with the percentage change in the year and in the month.

TABLE 1.—AVERAGE RETAIL PRICE PER 2,000 POUNDS OF COAL FOR THE UNITED STATES, AND PER CENT OF CHANGE ON JUNE 15, 1932, COMPARED WITH JUNE 15, 1931, AND MAY 15, 1932

Article	Average retail price on—			Per cent of increase (+) or decrease (—) June 15, 1932, compared with—	
	June 15, 1931	May 15, 1932	June 15, 1932	June 15, 1931	May 15, 1932
Pennsylvania anthracite:					
Stove—					
Average price per 2,000 pounds.....	\$14.33	\$13.30	\$13.37	—6.7	+0.5
Index (1913=100.0).....	185.5	162.6	173.1		
Chestnut—					
Average price per 2,000 pounds.....	\$14.31	\$13.11	\$13.17	—8.0	+0.5
Index (1913=100.0).....	180.8	165.6	166.4		
Bituminous:					
Average price per 2,000 pounds.....	\$8.00	\$7.60	\$7.53	—5.9	—0.9
Index (1913=100.0).....	147.3	139.9	138.6		

Table 2 shows average retail prices of coal on December 15, 1931, and June 15, 1932, by cities. In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

TABLE 2.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON DECEMBER 15, 1931, AND JUNE 15, 1932

City, and kind of coal	Dec. 15, 1931	June 15, 1932	City, and kind of coal	Dec. 15, 1931	June 15, 1932
Atlanta, Ga.:			Cincinnati, Ohio:		
Bituminous, prepared sizes.....	\$6.53	\$5.70	Bituminous—		
Baltimore, Md.:			Prepared sizes—		
Pennsylvania anthracite—			High volatile.....	\$5.75	\$4.90
Stove.....	14.00	12.21	Low volatile.....	8.00	6.75
Chestnut.....	13.75	11.75	Cleveland, Ohio:		
Bituminous, run of mine—			Pennsylvania anthracite—		
High volatile.....	7.57	6.96	Stove.....	14.38	13.56
Birmingham, Ala.:			Chestnut.....	14.31	13.31
Bituminous, prepared sizes.....	6.36	4.98	Bituminous—		
Boston, Mass.:			Prepared sizes—		
Pennsylvania anthracite—			High volatile.....	6.56	6.17
Stove.....	15.00	13.25	Low volatile.....	9.11	8.32
Chestnut.....	15.00	13.00	Columbus, Ohio:		
Bridgeport, Conn.:			Bituminous—		
Pennsylvania anthracite—			Prepared sizes—		
Stove.....	14.13	13.00	High volatile.....	5.21	5.06
Chestnut.....	14.13	13.00	Low volatile.....	7.25	6.13
Buffalo, N. Y.:			Dallas, Tex.:		
Pennsylvania anthracite—			Arkansas anthracite—Egg.....		14.00
Stove.....	13.40	11.88	Bituminous, prepared sizes.....	10.83	10.25
Chestnut.....	13.40	11.63	Denver, Colo.:		
Butte, Mont.:			Colorado anthracite—		
Bituminous, prepared sizes.....	10.02	9.73	Furnace, 1 and 2 mixed.....	14.75	14.75
Charleston, S. C.:			Stove, 3 and 5 mixed.....	14.75	14.75
Bituminous, prepared sizes.....	9.50	9.50	Bituminous, prepared sizes.....	8.16	7.64
Chicago, Ill.:			Detroit, Mich.:		
Pennsylvania anthracite—			Pennsylvania anthracite—		
Stove.....	16.75	15.30	Stove.....	14.50	13.00
Chestnut.....	16.75	15.05	Chestnut.....	14.50	12.79
Bituminous—			Bituminous—		
Prepared sizes—			Prepared sizes—		
High volatile.....	7.89	7.53	High volatile.....	6.32	6.06
Low volatile.....	11.32	8.97	Low volatile.....	7.96	6.68
Run of mine—			Run of mine—		
Low volatile.....	7.48	6.95	Low volatile.....	7.13	6.19

TABLE 2.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON DECEMBER 15, 1931, AND JUNE 15, 1932—Continued

City, and kind of coal	Dec. 15, 1931	June 15, 1932	City, and kind of coal	Dec. 15, 1931	June 15, 1932
Fall River, Mass.: Pennsylvania anthracite— Stove.....	\$16.00	\$14.00	Omaha, Nebr.: Bituminous, prepared sizes.....	\$5.80	\$8.69
Chestnut.....	16.00	13.75	Peoria, Ill.: Bituminous, prepared sizes.....	5.98	6.08
Houston, Tex.: Bituminous, prepared sizes.....	11.00	9.40	Philadelphia, Pa.: Pennsylvania anthracite— Stove.....	13.50	11.00
Indianapolis, Ind.: Bituminous— Prepared sizes— High volatile.....	5.68	4.84	Chestnut.....	13.50	10.75
Low volatile.....	8.13	6.71	Pittsburgh, Pa.: Pennsylvania anthracite— Chestnut.....	14.00	13.25
Run of mine— Low volatile.....	6.60	5.70	Bituminous, prepared sizes.....	4.86	4.39
Jacksonville, Fla.: Bituminous, prepared sizes.....	10.00	9.50	Portland, Me.: Pennsylvania anthracite— Stove.....	16.80	15.52
Kansas City, Mo.: Arkansas anthracite— Furnace.....	11.38	10.81	Chestnut.....	16.80	15.28
Stove No. 4.....	12.83	12.33	Portland, Oreg.: Bituminous, prepared sizes.....	12.29	11.98
Bituminous, prepared sizes.....	6.12	5.85	Providence, R. I.: Pennsylvania anthracite— Stove.....	15.75	14.00
Little Rock, Ark.: Arkansas anthracite—Egg.....	12.00	11.75	Chestnut.....	15.75	13.75
Bituminous, prepared sizes.....	9.22	8.33	Richmond, Va.: Pennsylvania anthracite— Stove.....	14.50	12.75
Los Angeles, Calif.: Bituminous, prepared sizes.....	16.25	15.25	Chestnut.....	14.50	12.75
Louisville, Ky.: Bituminous— Prepared sizes— High volatile.....	5.24	4.63	Bituminous— Prepared sizes— High volatile.....	8.17	6.67
Low volatile.....	8.38	6.75	Low volatile.....	8.81	7.15
Manchester, N. H.: Pennsylvania anthracite— Stove.....	16.33	14.50	Run of mine— Low volatile.....	7.25	6.25
Chestnut.....	16.33	14.50	Rochester, N. Y.: Pennsylvania anthracite— Stove.....	14.38	12.63
Memphis, Tenn.: Bituminous, prepared sizes.....	6.89	6.73	Chestnut.....	14.38	12.38
Milwaukee, Wis.: Pennsylvania anthracite— Stove.....	16.05	14.45	St. Louis, Mo.: Pennsylvania anthracite— Stove.....	16.60	14.72
Chestnut.....	16.05	14.20	Chestnut.....	16.60	14.72
Bituminous— Prepared sizes— High volatile.....	7.45	6.97	Bituminous, prepared sizes.....	5.73	5.48
Low volatile.....	10.01	8.78	St. Paul, Minn.: Pennsylvania anthracite— Stove.....	18.05	16.75
Minneapolis, Minn.: Pennsylvania anthracite— Stove.....	18.05	16.75	Chestnut.....	18.05	16.50
Chestnut.....	18.05	16.50	Bituminous— Prepared sizes— High volatile.....	9.66	9.50
Bituminous— Prepared sizes— High volatile.....	9.83	9.60	Low volatile.....	12.56	11.87
Low volatile.....	12.54	11.87	Salt Lake City, Utah: Bituminous, prepared sizes.....	7.63	7.63
Mobile, Ala.: Bituminous, prepared sizes.....	8.91	7.72	San Francisco, Calif.: New Mexico anthracite— Cerrillos egg.....	26.00	25.00
Newark, N. J.: Pennsylvania anthracite— Stove.....	13.55	11.75	Colorado anthracite— Egg.....	25.50	24.50
Chestnut.....	13.55	11.50	Bituminous, prepared sizes.....	17.00	15.00
New Haven, Conn.: Pennsylvania anthracite— Stove.....	14.90	13.65	Savannah, Ga.: Bituminous, prepared sizes.....	8.87	8.37
Chestnut.....	14.90	13.65	Scranton, Pa.: Pennsylvania anthracite— Stove.....	10.30	8.63
Bituminous, prepared sizes.....	9.93	8.64	Chestnut.....	10.28	8.48
New Orleans, La.: Bituminous, prepared sizes.....	9.93	8.64	Seattle, Wash.: Bituminous, prepared sizes.....	10.73	10.17
New York, N. Y.: Pennsylvania anthracite— Stove.....	13.83	11.92	Springfield, Ill.: Bituminous, prepared sizes.....	4.34	4.34
Chestnut.....	13.83	11.67	Washington, D. C.: Pennsylvania anthracite— Stove.....	15.40	13.56
Norfolk, Va.: Pennsylvania anthracite— Stove.....	14.50	12.50	Chestnut.....	15.40	13.26
Chestnut.....	14.50	12.50	Bituminous— Prepared sizes— High volatile.....	8.46	8.29
Bituminous— Prepared sizes— High volatile.....	7.00	6.50	Low volatile.....	11.04	9.86
Low volatile.....	9.00	7.50	Run of mine— Mixed.....	7.75	7.50
Run of mine— Low volatile.....	7.00	6.50			

¹ The average price of coal delivered in bins is 50 cents higher than here shown. Practically all coal is delivered in bins.

² All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

³ Per ton of 2,240 pounds.

Retail Prices of Gas in the United States

THE net price per 1,000 cubic feet of gas for household use in each of 51 cities is published in June and December of each year. The average family consumption of manufactured gas is assumed to be 3,000 cubic feet per month. In cities where a service charge or a sliding scale is in operation, families using less than 3,000 cubic feet per month pay a somewhat higher rate than here shown, while those consuming more than this amount pay a lower rate. The figures here given are believed to represent quite closely the actual monthly cost of gas per 1,000 cubic feet to the average wage-earner's family.

From the prices quoted on manufactured gas, average net prices have been computed for all cities combined. Prices and index numbers showing the trend since April, 1913, are shown in Table 1. The index numbers are based on the price in April, 1913.

TABLE 1.—AVERAGE PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS AND INDEX NUMBER IN SPECIFIED MONTHS OF EACH YEAR 1913 AND 1928 TO 1932 FOR THE UNITED STATES

Date	Average net price	Index	Date	Average net price	Index
1913: April.....	\$0.95	100.0	1930: June.....	\$1.21	127.4
1928: June.....	1.21	127.4	December.....	1.18	124.2
December.....	1.22	128.4	1931: June.....	1.18	124.2
1929: June.....	1.22	128.4	December.....	1.15	121.1
December.....	1.21	127.4	1932: June.....	1.15	121.1

Table 2 shows the net price of manufactured gas in December, 1931, and June, 1932, by cities.

TABLE 2.—NET PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS BASED ON A FAMILY CONSUMPTION OF 3,000 CUBIC FEET ON DECEMBER 15, 1931, AND JUNE 15, 1932, BY CITIES

City	Dec. 15, 1931	June 15, 1932	City	Dec. 15, 1931	June 15, 1932
Baltimore.....	\$0.85	\$0.85	Norfolk.....	\$1.32	\$1.32
Birmingham.....	.80	.80	Omaha.....	.79	.79
Boston.....	1.16	1.16	Peoria.....	1.19	1.19
Charleston, S. C.....	1.45	1.45	Philadelphia.....	.95	.95
Cleveland.....	1.25	1.25	Portland, Me.....	1.42	1.42
Detroit.....	.79	.77	Portland, Oreg.....	1.17	1.17
Fall River.....	1.14	1.14	Providence.....	1.13	1.13
Honolulu, T. H.....	1.77	1.77	Richmond.....	1.29	1.29
Indianapolis.....	.95	.95	Rochester.....	1.00	1.00
Jacksonville.....	1.92	1.92	St. Louis.....	1.10	1.10
Manchester.....	1.34	1.34	St. Paul.....	.90	.90
Milwaukee.....	.82	.82	Savannah.....	1.45	1.45
Minneapolis.....	.96	.96	Scranton.....	1.40	1.40
Newark.....	1.21	1.21	Seattle.....	1.43	1.43
New Haven.....	1.13	1.13	Springfield, Ill.....	1.25	1.25
New York.....	1.24	1.23	Washington.....	.95	.93

¹ Price based on 17 therms which is the equivalent of 3,000 cubic feet of gas of a heating value of 565 B. t. u. per cubic foot.

Prices for natural gas and for manufactured and natural mixed gas in December, 1931, and June, 1932, are shown in Table 3 for those cities where it is in general use. These prices are based on an estimated average family consumption of 5,000 cubic feet per month.

TABLE 3.—NET PRICE PER 1,000 CUBIC FEET OF GAS BASED ON A FAMILY CONSUMPTION OF 5,000 CUBIC FEET ON DECEMBER 15, 1931, AND JUNE 15, 1932, BY CITIES

NATURAL GAS

City	Dec. 15, 1931	June 15, 1932	City	Dec. 15, 1931	June 15, 1932
Atlanta.....	\$1.09	\$1.09	Los Angeles.....	\$0.84	\$0.84
Butte.....	.70	.70	Louisville.....	.45	.45
Cincinnati.....	.75	.75	Memphis.....	.95	.95
Cleveland.....	.60	.60	Mobile.....	1.24	1.24
Columbus.....	.48	.48	New Orleans.....	.95	.95
Dallas.....	.79	.79	Peoria.....		¹ 1.95
Denver.....	.99	.99	Pittsburgh.....	.60	.60
Houston.....	.75	.75	Salt Lake City.....	.99	.99
Kansas City.....	.95	.95	San Francisco.....	.97	.97
Little Rock.....	.65	.65	Springfield.....		¹ 2.00

MANUFACTURED AND NATURAL GAS, MIXED

Buffalo.....	\$0.65	\$0.65	Chicago.....	² \$1.32	² \$1.32
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¹ Price based on 50 therms which is the equivalent of 5,000 cubic feet of gas of a heating value of 1,000 B. t. u. per cubic foot.

² Price based on 40 therms which is the equivalent of 5,000 cubic feet of gas of a heating value of 800 B. t. u. per cubic foot.

Retail Prices of Electricity in the United States

Explanation of Prices

THE following table shows for 51 cities the net rates per kilowatt-hour of electricity used for household purposes in December, 1931, and June, 1932. These rates are published in June and December of each year. For the cities having more than one tariff for domestic consumers the rates are shown for the schedule under which most of the residences are served.

Several cities have sliding scales based on a variable number of kilowatt-hours payable at each rate. The number of kilowatt-hours payable at each rate in these cities is determined for each customer according to the watts of installation, either in whole or in part, in the individual home. The number of watts so determined is called the customer's "demand."

In Baltimore the demand is the maximum normal rate of use of electricity in any half-hour period of time. It may be estimated or determined by the company from time to time according to the customer's normal use of electricity and may equal the total installation reduced to kilowatts.

In Buffalo the demand consists of two parts—lighting, 25 per cent of the total installation, but never less than 250 watts; and power, 2½ per cent of the capacity of any electric range, water heater, or other appliance of 1,000 watts or over and 25 per cent of the rated capacity of motors exceeding one-half horsepower but less than 1 horsepower. The installation is determined by inspection of premises.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE ON
DECEMBER 15, 1931, AND JUNE 15, 1932, FOR 51 CITIES

City	Measure of consumption, per month	Dec. 15, 1931	June 15, 1932
		Cents	Cents
Atlanta.....	Service charge.....	100.0	100.0
	First 50 kilowatt-hours.....	5.0	5.0
	Next 150 kilowatt-hours.....	3.0	3.0
Baltimore.....	First 20 hours' use of demand ¹	6.7	6.7
	Next kilowatt-hours equal to 8 times the consumption at the primary rate—minimum 200 kilowatt-hours.....	3.4	3.4
Birmingham.....	First 100 kilowatt-hours.....	7.7	7.5
Boston.....	First 2 kilowatt-hours per 100 square feet of floor area.....	7.5	7.5
	Next 70 kilowatt-hours.....	5.0	5.0
	Excess.....	3.0	3.0
Bridgeport.....	First 400 kilowatt-hours.....	² 5.5	5.3
Buffalo.....	First 60 hours' use of demand ¹	5.0	5.0
	Next 120 hours' use of demand ¹	4.0	4.0
	Excess.....	1.5	1.5
Butte.....	First 25 kilowatt-hours.....	8.0	8.0
	Next 25 kilowatt-hours.....	4.0	4.0
Charleston, S. C.....	First 100 kilowatt-hours.....	9.0	9.0
Chicago.....	First 3 kilowatt-hours per room.....	7.0	7.0
	Next 3 kilowatt-hours per room.....	5.0	5.0
	Excess.....	3.0	3.0
Cincinnati.....	Service charge per room.....	10.0	10.0
	First 6 kilowatt-hours per room; minimum, 4 rooms.....	5.0	5.0
	Excess.....	3.0	3.0
Cleveland:			
Company A.....	First 40 kilowatt-hours.....	5.0	5.0
	Next 200 kilowatt-hours.....	4.0	4.0
Company B.....	Service charge.....	30.0	30.0
	Next 600 kilowatt-hours.....	3.0	3.0
Columbus.....	First 50 kilowatt-hours.....	6.0	6.0
Dallas.....	First 800 kilowatt-hours.....	6.0	6.0
Denver.....	First 40 kilowatt-hours.....	³ 7.0	6.0
	Next 30 kilowatt-hours.....	6.0	
	Excess.....	5.0	5.0
Detroit.....	First 3 kilowatt-hours per active room; minimum, 3 rooms.....	9.0	9.0
	Next 50 kilowatt-hours.....	3.6	3.6
	Excess.....	2.3	2.3
Fall River.....	First 25 kilowatt-hours.....	8.0	8.0
	Next 75 kilowatt-hours.....	5.0	5.0
Houston.....	First 3 kilowatt-hours per room; minimum, 4 rooms.....	7.0	7.0
	Next 100 kilowatt-hours.....	4.0	4.0
Indianapolis.....	First 50 kilowatt-hours.....	6.5	6.3
	Next 50 kilowatt-hours.....	6.0	6.0
Jacksonville.....	First 500 kilowatt-hours.....	7.0	7.0
Kansas City.....	First 5 kilowatt-hours per active room; minimum, 3 rooms.....	6.5	6.5
	Next 5 kilowatt-hours per room.....	4.5	4.5
	Excess.....	2.5	2.5
Little Rock.....	First 4 rooms or less. Rooms in excess of 4, 10 cents each addi- tional.....	50.0	50.0
	First 6 kilowatt-hours per room.....	7.0	7.0
	Next 6 kilowatt-hours per room.....	5.0	5.0
Los Angeles.....	First 35 kilowatt-hours.....	4.8	4.8
	Next 140 kilowatt-hours.....	2.5	2.5
Louisville.....	First 30 kilowatt-hours.....	7.6	7.6
Manchester.....	First step: 3 rooms, 15 kilowatt-hours; 4 rooms, 18 kilowatt- hours; 5 rooms, 21 kilowatt-hours; 6 rooms, 24 kilowatt- hours; 7 rooms, 27 kilowatt-hours; 8 rooms, 30 kilowatt- hours.....	10.0	10.0
	Next step: Number of kilowatt-hours equal to the first step.....	6.0	6.0
Memphis.....	First 6 kilowatt-hours per room.....	8.0	8.0
	Excess.....	5.0	5.0
Milwaukee.....	First 9 kilowatt-hours for each of the first 6 active rooms and the first 7 kilowatt-hours for each active room in addition to the first 6.....	6.2	6.2
	Next kilowatt-hours up to 150.....	2.9	2.9
	Excess.....	1.9	1.9
Minneapolis.....	First 3 kilowatt-hours per active room; minimum, 2 rooms.....	8.6	7.6
	Next 3 kilowatt-hours per active room.....	7.1	7.1
Mobile.....	Service charge for house of 3 rooms—consumption of 5 kilowatt- hours included, 10 cents extra for each additional room; not more than 10 rooms counted.....	80.0	80.0
	Next 45 kilowatt-hours.....	5.0	5.0
Newark.....	First 20 kilowatt-hours.....	9.0	9.0
	Next 20 kilowatt-hours.....	⁴ 8.0	8.0
New Haven.....	First 400 kilowatt-hours.....	² 5.5	5.3
New Orleans.....	Service charge.....	25.0	25.0
	First 20 kilowatt-hours.....	9.1	9.1
	Next 30 kilowatt-hours.....	7.8	7.8

See footnotes at end of table.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE ON
DECEMBER 15, 1931, AND JUNE 15, 1932, FOR 51 CITIES—Continued

City	Measure of consumption, per month	Dec. 15, 1931	June 15, 1932
		<i>Cents</i>	<i>Cents</i>
New York:			
Company A	First 10 kilowatt-hours or less	100.0	100.0
	Next 5 kilowatt-hours	6.0	6.0
	Excess	5.0	5.0
Company B	All current	9.5	9.5
Company C	First 10 kilowatt-hours or less	100.0	100.0
	Next 5 kilowatt-hours	6.0	6.0
	Excess	5.0	5.0
Norfolk	First 100 kilowatt-hours	7.5	7.5
Omaha	First 10 kilowatt-hours per room	5.5	5.5
	Next 160 kilowatt-hours	3.0	3.0
Peoria	First 4 kilowatt-hours per active room	9.0	9.0
	Next 4 kilowatt-hours per active room	6.0	6.0
	Excess	3.0	3.0
Philadelphia:			
Company A	Minimum charge including use of first 10 kilowatt-hours	75.0	75.0
	Next 38 kilowatt-hours	6.0	6.0
Company B	First 20 kilowatt-hours	9.0	9.0
	Next 20 kilowatt-hours	¹ 8.0	8.0
Pittsburgh	First 10 kilowatt-hours	8.0	8.0
	Next 20 kilowatt-hours	5.5	5.5
	Next 30 kilowatt-hours	4.0	4.0
Portland, Me.	First 3 rooms, 15 kilowatt-hours; 4 rooms, 18 kilowatt-hours; 5 rooms, 21 kilowatt-hours; 6 rooms, 24 kilowatt-hours; 7 rooms, 27 kilowatt-hours; 8 rooms, 30 kilowatt-hours.	8.0	8.0
	Next 3 rooms, 35 kilowatt-hours; 4 rooms, 42 kilowatt-hours; 5 rooms, 49 kilowatt-hours; 6 rooms, 56 kilowatt-hours; 7 rooms, 63 kilowatt-hours; 8 rooms, 70 kilowatt-hours.	5.0	5.0
Portland, Oreg.:			
Company A	First 30 kilowatt-hours	5.5	5.5
	Next 40 kilowatt-hours	3.0	3.0
	Excess	1.8	1.8
Company B	First 30 kilowatt-hours	5.5	5.5
	Next 40 kilowatt-hours	3.0	3.0
	Excess	1.8	1.8
Providence	Service charge including 3 kilowatt-hours	² 50.0	50.0
	Next 60 kilowatt-hours	³ 6.5	6.5
Richmond	First 100 kilowatt-hours	7.5	7.5
Rochester	Service charge including first 12 kilowatt-hours	100.0	100.0
	Next 48 kilowatt-hours	5.5	5.5
St. Louis:			
Company A	First 9 kilowatt-hours per active room	6.7	6.7
	Excess	2.4	2.4
Company B	First 4 rooms or less, 18 kilowatt-hours; 5 or 6 rooms, 27 kilowatt-hours; 7 or 8 rooms, 36 kilowatt-hours.	6.7	6.7
	Excess	2.4	2.4
St. Paul	First 3 kilowatt-hours per room, minimum 2 rooms	8.6	8.6
	Next 3 kilowatt-hours per room	7.1	7.1
	Excess	2.9	2.9
Salt Lake City	Service charge—consumption of 11 kilowatt-hours included	90.0	90.0
	Excess	7.0	7.0
San Francisco	Service charge	40.0	40.0
	First 30 kilowatt-hours for residence of 6 rooms. 5 kilowatt-hours added for each additional room.	4.5	4.5
	Next 140 kilowatt-hours	3.5	3.5
Savannah	Service charge	100.0	100.0
	First 50 kilowatt-hours	6.0	6.0
Scranton	Service charge	100.0	100.0
	All current	5.0	5.0
Seattle:			
Company A	First 40 kilowatt-hours	5.5	5.5
	Next 200 kilowatt-hours	2.0	2.0
Company B	First 40 kilowatt-hours	5.5	5.5
	Next 200 kilowatt-hours	2.0	2.0
Springfield, Ill.:			
Company A	First 30 kilowatt-hours	6.0	5.0
	Next 30 kilowatt-hours	⁴ 3.0	4.0
	Next 40 kilowatt-hours		3.0
Company B	First 30 kilowatt-hours	6.0	5.0
	Next 30 kilowatt-hours	⁴ 3.0	4.0
	Next 40 kilowatt-hours		3.0
Washington, D. C.	First 50 kilowatt-hours	⁵ 4.2	3.9
	Next 50 kilowatt-hours		3.8
Honolulu, Hawaii	First 100 kilowatt-hours	7.5	7.5

¹ For determination of demand see explanation of prices.² All current.³ First 15 kilowatt-hours.⁴ Next 30 kilowatt-hours.⁵ Service charge.⁶ Next 70 kilowatt-hours.

WHOLESALE PRICES

Index Numbers of Wholesale Prices, 1913 to June, 1932

THE following table presents the index numbers of wholesale prices by groups of commodities, for specified years, and by months from January, 1931, to date.

INDEX NUMBERS OF WHOLESALE PRICES

[1926=100.0]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1913.....	71.5	64.2	68.1	57.3	61.3	90.8	56.7	80.2	56.3	93.1	69.8
1920.....	150.7	137.4	171.3	164.8	163.7	149.4	150.1	164.7	141.8	167.5	154.4
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927.....	99.4	96.7	107.7	95.6	88.3	96.3	94.7	96.8	97.5	91.0	95.4
1928.....	105.9	101.0	121.4	95.5	84.3	97.0	94.1	95.6	95.1	85.4	96.7
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.2	94.3	82.6	95.3
1930.....	88.3	90.5	100.0	80.3	78.5	92.1	89.9	89.1	92.7	77.7	86.4
1931.....	64.8	74.6	86.1	66.3	67.5	84.5	79.2	79.3	84.9	69.8	73.0
1931:											
January.....	73.1	80.7	88.7	71.3	73.3	86.9	83.8	84.5	88.3	72.2	78.2
February.....	70.1	78.0	86.9	70.9	72.5	86.5	82.5	83.3	88.1	71.5	76.8
March.....	70.6	77.6	87.6	70.0	68.3	86.4	82.5	82.9	88.0	72.0	76.0
April.....	70.1	76.3	87.5	68.2	65.4	85.7	81.5	81.3	87.9	71.5	74.8
May.....	67.1	73.8	87.6	67.4	65.3	85.0	80.0	80.5	86.8	70.5	73.2
June.....	65.4	73.3	88.0	66.6	62.9	84.4	79.3	79.4	86.4	69.7	72.1
July.....	64.9	74.0	89.4	66.5	62.9	84.3	78.1	78.9	85.7	69.7	72.0
August.....	63.5	74.6	88.7	65.5	66.5	83.9	77.6	76.9	84.9	68.3	72.1
September.....	60.5	73.7	85.0	64.5	67.4	83.9	77.0	76.3	82.7	68.2	71.2
October.....	58.8	73.3	82.5	63.0	67.8	82.8	76.1	75.6	81.0	66.6	70.3
November.....	58.7	71.0	81.6	62.2	69.4	82.6	76.2	76.1	80.9	68.7	70.2
December.....	55.7	69.1	79.8	60.8	68.3	82.2	75.7	76.1	78.5	66.8	68.6
1932:											
January.....	52.8	64.7	79.3	59.9	67.9	81.8	74.8	75.7	77.7	65.6	67.3
February.....	50.6	62.5	78.3	59.8	68.3	80.9	73.4	75.5	77.5	64.7	66.3
March.....	50.2	62.3	77.3	58.7	67.9	80.8	73.2	75.3	77.1	64.7	66.0
April.....	49.2	61.0	75.0	57.0	70.2	80.3	72.5	74.4	76.3	64.7	65.5
May.....	46.6	59.3	72.5	55.6	70.7	80.1	71.5	73.6	74.8	64.4	64.4
June.....	45.7	58.8	70.8	53.9	71.6	79.9	70.8	73.1	74.7	64.2	63.9

INDEX NUMBERS OF SPECIFIED GROUPS OF COMMODITIES

[1926=100.0]

Group	June, 1931	May, 1932	June, 1932
Raw materials.....	64.7	53.9	53.2
Semimanufactured articles.....	69.3	58.1	57.6
Finished products.....	76.0	70.3	70.0
Nonagricultural commodities.....	73.4	68.1	67.8
All commodities other than farm products and foods.....	74.1	70.4	70.1

Weekly Index Numbers of Wholesale Prices

A SUMMARIZATION of the weekly index numbers for the 10 major groups of commodities and for all commodities combined as issued during the month of June will be found in the following statement:

INDEX NUMBERS OF WHOLESALE PRICES FOR THE WEEKS OF JUNE, 1932

[1926=100.0]

Group	Week ending—			
	June 4	June 11	June 18	June 25
All commodities.....	64.0	63.8	63.7	64.0
Farm products.....	45.6	45.8	45.4	46.4
Foods.....	58.6	58.6	58.5	59.5
Hides and leather products.....	72.0	71.5	71.2	70.1
Textile products.....	54.8	54.3	53.6	53.5
Fuel and lighting.....	71.3	71.3	71.6	71.8
Metals and metal products.....	79.9	79.9	79.9	79.8
Building materials.....	71.0	71.0	70.9	70.7
Chemicals and drugs.....	73.2	73.1	73.0	72.9
House-furnishing goods.....	75.8	75.6	75.7	75.7
Miscellaneous.....	64.0	64.0	64.0	64.2

Index Numbers of Wholesale Prices, June, 1932

THE index number of wholesale commodity prices as computed by the Bureau of Labor Statistics of the United States Department of Labor shows a decrease from May, 1932, to June, 1932. This index number, which includes 784 commodities or price series weighted according to the importance of each article, and based on the average prices for the year 1926 as 100.0, averaged 63.9 for June as compared with 64.4 for May, showing a decrease of approximately three-fourths of 1 per cent between the two months. When compared with June, 1931, with an index number of 72.1, a decrease of about 11 per cent has been recorded in the 12 months.

In the group of farm products decreases in the average prices of grains, live poultry, dried beans, cotton, hay, fresh milk at Chicago, onions, tobacco, and wool, caused the group as a whole to decline 2 per cent from the previous month. Increases in the average prices of calves, cows, steers, hogs, sheep, lemons, and oranges were shown for June.

Among foods price decreases were reported for butter, cheese, evaporated and condensed milk, flour, canned corn and peas, fresh and cured beef, bacon, ham, dressed poultry, cocoa beans, and coffee. On the other hand, rice, lamb, mutton, fresh pork, veal, lard, raw and granulated sugar averaged higher than in the previous month. The group as a whole declined about 1 per cent in June when compared with May.

The hides and leather products group decreased $2\frac{1}{2}$ per cent during the month, with all the subgroups sharing in the decline. Textile products as a whole decreased 3 per cent from May to June, due to marked declines for cotton goods, knit goods, silk and rayon, woolen and worsted goods, and other textile products. The subgroup of clothing declined slightly.

In the group of fuel and lighting materials increases in the prices of gas, electricity, Pennsylvania fuel oil, gasoline, and California crude petroleum more than offset decreases in the prices of anthracite

coal, bituminous coal, and coke. As a whole the group showed a net advance of $1\frac{1}{4}$ per cent over the May level.

Metals and metal products showed a slight downward tendency for June, due to decreases in iron and steel products and nonferrous metals. Increases were reported for plumbing and heating fixtures while agricultural implements and motor vehicles remained at the May level. In the group of building materials cement moved upward, and structural steel showed no change in average prices for the two months. Brick and tile, lumber, paint and paint materials, and other building materials continued their downward movement, forcing the group as a whole to decline approximately 1 per cent.

Chemicals, drugs and pharmaceuticals, and fertilizer materials showed further recession during June. Mixed fertilizers showed practically no change between the two months. The decrease of the group as a whole was two-thirds of 1 per cent for June.

Both furniture and furnishings declined slightly from May to June. As a whole the house-furnishing goods group declined only one-tenth of 1 per cent from the month before.

The group of miscellaneous commodities decreased one-third of 1 per cent between May and June due to declining prices of cattle feed, paper and pulp, and crude rubber, while for automobile tires and tubes the trend was upward. Other miscellaneous commodities remained at the level of the previous month.

The June averages for all of the special groups of commodities were below those for May, ranging from a little less than one-half of 1 per cent in the case of finished products to $1\frac{1}{2}$ per cent in the case of raw materials. Between May and June price decreases took place in 296 instances, increases in 77 instances, while in 411 instances no change in price occurred.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Commodity groups and subgroups	June, 1931	May, 1932	June, 1932	Purchasing power of the dollar, June, 1932
All commodities.....	72.1	64.4	63.9	\$1.565
Farm products.....	65.4	46.6	45.7	2.188
Grains.....	56.0	42.6	37.7	2.653
Livestock and poultry.....	61.9	44.4	46.7	2.141
Other farm products.....	70.8	49.6	48.2	2.075
Foods.....	73.3	59.3	58.8	1.701
Butter, cheese, and milk.....	78.8	59.6	57.4	1.742
Cereal products.....	74.3	68.1	66.8	1.497
Fruits and vegetables.....	76.4	61.5	62.4	1.603
Meats.....	71.3	56.5	56.0	1.786
Other foods.....	68.5	54.9	55.4	1.805
Hides and leather products.....	88.0	72.5	70.8	1.412
Boots and shoes.....	94.6	88.4	87.5	1.143
Hides and skins.....	65.5	35.7	32.5	3.077
Leather.....	87.8	60.6	58.7	1.704
Other leather products.....	101.4	97.9	96.4	1.037
Textile products.....	66.6	55.6	53.9	1.855
Clothing.....	76.3	68.2	67.4	1.484
Cotton goods.....	67.6	52.9	51.0	1.961
Knit goods.....	59.8	50.5	49.6	2.016
Silk and rayon.....	41.9	29.1	27.5	3.636
Woolen and worsted goods.....	68.0	58.3	55.0	1.818
Other textile products.....	75.5	67.2	66.7	1.499
Fuel and lighting materials.....	62.9	70.7	71.6	1.397
Anthracite coal.....	88.8	85.6	85.3	1.172
Bituminous coal.....	83.2	82.0	81.8	1.222
Coke.....	81.5	77.1	76.9	1.300
Electricity.....	98.6	106.1	(1)
Gas.....	101.9	103.0	(1)
Petroleum products.....	30.7	47.2	48.2	2.075
Metals and metal products.....	84.4	80.1	79.9	1.252
Agricultural implements.....	94.2	84.9	84.9	1.178
Iron and steel.....	83.5	80.0	79.8	1.253
Motor vehicles.....	94.2	93.8	93.8	1.066
Nonferrous metals.....	61.2	48.3	47.5	2.105
Plumbing and heating.....	86.6	64.4	66.7	1.499
Building materials.....	79.3	71.5	70.8	1.412
Brick and tile.....	83.7	77.4	76.1	1.314
Cement.....	77.7	75.0	77.1	1.297
Lumber.....	68.5	59.5	57.6	1.736
Paint and paint materials.....	80.0	73.9	73.3	1.364
Plumbing and heating.....	86.6	64.4	66.7	1.499
Structural steel.....	84.3	81.7	81.7	1.224
Other building materials.....	85.4	78.2	77.6	1.289
Chemicals and drugs.....	79.4	73.6	73.1	1.368
Chemicals.....	82.5	79.1	78.6	1.272
Drugs and pharmaceuticals.....	62.6	58.7	58.3	1.715
Fertilizer materials.....	79.8	69.4	68.0	1.471
Mixed fertilizers.....	82.4	69.0	69.0	1.449
Housefurnishing goods.....	86.4	74.8	74.7	1.339
Furnishings.....	83.4	75.5	75.4	1.326
Furniture.....	89.8	74.1	74.0	1.351
Miscellaneous.....	69.7	64.4	64.2	1.558
Automobile tires and tubes.....	46.0	39.2	39.6	2.523
Cattle feed.....	61.1	45.9	42.1	2.375
Paper and pulp.....	80.7	76.5	76.2	1.312
Rubber, crude.....	13.3	6.7	5.8	17.241
Other miscellaneous.....	88.2	84.6	84.6	1.182
Raw materials.....	64.7	53.9	53.2	1.880
Semimanufactured articles.....	69.3	58.1	57.6	1.736
Finished products.....	76.0	70.3	70.0	1.429
Nonagricultural commodities.....	73.4	68.1	67.8	1.475
All commodities less farm products and foods.....	74.1	70.4	70.1	1.427

¹ Data not yet available.

COST OF LIVING

Changes in the Cost of Living in the United States

A VERY appreciable reduction in the cost of living has accompanied the general industrial depression. The cost of living index number for the United States shows a decrease of 18.5 per cent from June, 1930, to June, 1932, 9.7 per cent from June, 1931, to June, 1932, and 6.9 per cent from December, 1931, to June, 1932. The June, 1932, cost of living index for the United States is the lowest recorded during the past 15 years, being 4.7 per cent lower than in 1917. Considering the peak of June, 1920, the June, 1932, figure is 37.3 per cent lower, and as compared with June, 1929, the decrease has been 20.3 per cent. These figures are based on studies now made semiannually by the United States Bureau of Labor Statistics. The information is obtained from retail merchants and dealers in 32 cities.

Prices on 42 articles of food are obtained monthly by mail from 15 to 25 grocers, meat dealers, bakers, and dairymen, who regularly report their prices, in each of the 32 cost-of-living cities. Fuel and light prices are also obtained from regular correspondents. The public utilities furnish gas and electricity figures while prices on coal and wood are reported by 10 to 15 firms in each city.

All other data are secured by personal visits of representatives of the bureau. Four quotations are procured on each article in every city except New York where five are obtained. Prices of clothing for men and boys are taken on 32 items including suits, overcoats, hats, caps, overalls or work trousers, shoes, rubbers, repair of shoes, underwear, and furnishings. The clothing schedule for women and girls lists 38 items, including coats, dresses, shoes, rubbers, repair of shoes, kimonos, hosiery, and underclothing. Prices are taken on silk, wool, and cotton yard goods which are used in making dresses and aprons for women and girls. The 28 furniture and house-furnishing articles on which prices are obtained include living-room, dining-room, and bedroom furniture; rugs, linoleum, household linens, and bedding; baby carriages, sewing machines, stoves, brooms, refrigerators, and kitchen tables.

Real estate agencies furnish rentals on from 500 to 2,500 unfurnished houses and apartments in each city. The miscellaneous schedule includes street-car fares, motion pictures, newspapers, physicians' fees, medicine, hospital fees for wards, dentists' fees, spectacles, laundry, cleaning supplies, barber service, toilet articles and preparations, telephone rates for residential service, and tobacco prices. The average price of each item is weighted according to its importance in the family budget.

The food group represents the largest and most significant expenditure of the wage-earning family. In June, 1932, the food prices were 15.4 per cent lower than in June, 1931, and 12.4 per cent lower

than in December, 1931. The decreases for the 6-month period ending June, 1932, ranged from 5.1 per cent to 17.3 per cent in the 32 cities. The present index of this group, 100.1 per cent, is only 0.1 per cent higher than in 1913.

The index number for clothing in June, 1932, is 5.7 per cent less than 6 months ago, the decreases for the 32 cities ranging from 2.5 per cent to 9.4 per cent. The June, 1932, index is 12.5 per cent less than one year ago and compares closely with that for December, 1916.

In June, 1932, rents were 6.2 per cent lower than in December, 1931, the decreases for the 32 cities ranging from 0.6 per cent to 11.3 per cent, and 10.0 per cent lower than in June, 1931. Rents have been steadily moving downward since the peak which occurred in December, 1924, and the present index compares with that for December, 1919.

Fuel and light decreased 6.5 per cent from December, 1931, the decreases for the 32 cities ranging from 0.9 per cent to 14.3 per cent. The June, 1932, index decreased 5.0 per cent from June, 1931, and compares with that of December, 1919. The price of gas decreased in two cities, of electricity in three cities, and of both gas and electricity in one city.

For the year, June, 1931, to June, 1932, there was a drop of 13.3 per cent on the house furnishing goods group of items and for the past 6 months period the decrease was 8.2 per cent, the decreases for the 32 cities ranging from 3.4 per cent to 13.9 per cent.

Only one city showed an increase for the miscellaneous items group, 1 per cent, which was caused largely by an increase in street-car fares. For the United States this group declined 1.6 per cent for the 6 months period ending June, 1932, the decreases for the 31 cities ranging from 0.1 per cent to 4.8 per cent. The decrease was 2.2 per cent for the year, June, 1931, to June, 1932. Because of the nature of the items included in the miscellaneous items group, it does not show price changes as actively as do those groups which might be said to be included in the primary essentials of life.

Table 1 shows the index numbers which represent changes in the six groups of items entering into living costs in the United States from 1913 to June, 1932.

TABLE 1.—INDEX NUMBERS SHOWING CHANGES IN COST OF GROUPS OF ITEMS ENTERING INTO COST OF LIVING IN THE UNITED STATES, 1913 TO JUNE, 1932

Date	Index numbers						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Average, 1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
December, 1914.....	105.0	101.0	100.0	101.0	104.0	103.0	103.0
December, 1915.....	105.0	104.7	101.5	101.0	110.6	107.4	105.1
December, 1916.....	126.0	120.0	102.3	108.4	127.8	113.3	118.3
December, 1917.....	157.0	149.1	100.1	124.1	150.6	140.5	142.4
December, 1918.....	187.0	205.3	109.2	147.9	213.6	165.8	174.4
June, 1919.....	184.0	214.5	114.2	145.6	225.1	13.2	177.3
December, 1919.....	197.0	268.7	125.3	156.8	263.5	190.2	199.3
June, 1920.....	219.0	287.5	134.9	171.9	292.7	201.4	216.5
December, 1920.....	178.0	258.5	151.1	194.9	285.4	208.2	200.4
May, 1921.....	144.7	222.6	159.0	181.6	247.7	208.8	180.4
September, 1921.....	153.1	192.1	160.1	180.9	224.7	207.8	177.3
December, 1921.....	149.9	184.4	161.4	181.1	218.0	206.8	174.3
March, 1922.....	138.7	175.5	160.9	175.8	206.2	203.3	166.9
June, 1922.....	140.7	172.3	160.9	174.2	202.9	201.5	166.4
September, 1922.....	139.7	171.3	161.1	183.6	202.9	201.1	166.3
December, 1922.....	146.6	171.5	161.9	186.4	208.2	200.5	169.5
March, 1923.....	141.9	174.4	162.4	186.2	217.6	200.3	168.8
June, 1923.....	144.3	174.9	163.4	180.6	222.2	200.3	169.7
September, 1923.....	149.3	176.5	164.4	181.3	222.4	201.1	172.1
December, 1923.....	150.3	176.3	166.5	184.0	222.4	201.7	173.2
March, 1924.....	143.7	175.8	167.0	182.2	221.3	201.1	170.4
June, 1924.....	142.4	174.2	168.0	177.3	216.0	201.1	169.1
September, 1924.....	146.8	172.3	168.0	179.1	214.9	201.1	170.6
December, 1924.....	151.5	171.3	168.2	180.5	216.0	201.7	172.5
June, 1925.....	155.0	170.6	167.4	176.5	214.3	202.7	173.5
December, 1925.....	165.5	169.4	167.1	186.9	214.3	203.5	177.9
June, 1926.....	159.7	168.2	165.4	180.7	210.4	203.3	174.8
December, 1926.....	161.8	166.7	164.2	188.3	207.7	203.9	175.6
June, 1927.....	158.5	164.9	162.1	180.8	205.2	204.5	173.4
December, 1927.....	155.9	162.9	160.2	183.2	204.6	205.1	172.0
June, 1928.....	152.6	162.6	157.6	177.2	201.1	205.5	170.0
December, 1928.....	155.8	161.9	155.9	181.3	199.7	207.1	171.3
June, 1929.....	154.8	161.3	153.7	175.2	198.5	207.3	170.2
December, 1929.....	158.0	160.5	151.9	178.7	197.7	207.9	171.4
June, 1930.....	147.9	158.9	149.6	172.8	195.7	208.5	166.6
December, 1930.....	137.2	153.0	146.5	175.0	188.3	208.1	160.7
June, 1931.....	118.3	146.0	142.0	165.4	177.0	206.6	150.3
December, 1931.....	114.3	135.5	136.2	168.0	167.1	205.4	145.8
June, 1932.....	100.1	127.8	127.8	157.1	153.4	202.1	135.7

Table 2 shows the per cent of decrease in the price of electricity in 32 cities since December, 1913. In the 6-month period from December, 1931, to June, 1932, this utility decreased 1.5 per cent, the decline from 1913 to June, 1932, being 21.0 per cent.

TABLE 2.—PER CENT OF DECREASE IN THE PRICE OF ELECTRICITY AT SPECIFIED PERIODS AS COMPARED WITH DECEMBER, 1913

Date	Per cent of decrease from December, 1913	Date	Per cent of decrease from December, 1913	Date	Per cent of decrease from December, 1913
December, 1914.....	3.7	June, 1922.....	6.2	June, 1926.....	11.1
December, 1915.....	6.2	September, 1922.....	6.2	December, 1926.....	11.1
December, 1916.....	8.6	December, 1922.....	7.4	June, 1927.....	12.3
December, 1917.....	11.1	March, 1923.....	7.4	December, 1927.....	12.3
December, 1918.....	6.2	June, 1923.....	7.4	June, 1928.....	13.6
June, 1919.....	6.2	September, 1923.....	8.6	December, 1928.....	14.8
December, 1919.....	7.4	December, 1923.....	8.6	June, 1929.....	17.3
June, 1920.....	7.4	March, 1924.....	8.6	December, 1929.....	17.3
December, 1920.....	4.9	June, 1924.....	8.6	June, 1930.....	18.5
May, 1921.....	4.9	September, 1924.....	8.6	December, 1930.....	18.5
September, 1921.....	4.9	December, 1924.....	8.6	June, 1931.....	19.8
December, 1921.....	4.9	June, 1925.....	9.9	December, 1931.....	19.8
March, 1922.....	4.9	December, 1925.....	9.9	June, 1932.....	21.0

Table 3 shows the per cent of decrease in the cost of living in each of the 32 cities and in the United States from June, 1920, June, 1929, June, 1931, and December, 1931, to June, 1932. In the period between June, 1920, and June, 1932, the decreases in the 32 cities ranged from 33.0 to 44.5 per cent and averaged 37.3 per cent for the United States. In the period from June, 1929, to June, 1932, the decreases ranged from 16.9 per cent to 26.5 per cent and averaged 20.3 per cent for the United States. For the period from June, 1931, to June, 1932, the decreases ranged from 7.5 per cent to 13.0 per cent and averaged 9.7 per cent for the United States. Comparing the recent 6-month period ending June, 1932, the decreases ranged from 4.7 per cent to 9.0 per cent and for the United States averaged 6.9 per cent.

TABLE 3.—PER CENT OF DECREASE IN COST OF LIVING IN SPECIFIED CITIES FROM JUNE, 1920, JUNE, 1929, JUNE, 1931, AND DECEMBER, 1931, TO JUNE, 1932

City	Per cent of decrease from—				City	Per cent of decrease from—			
	June, 1920, to June, 1932	June, 1929, to June, 1932	June, 1931, to June, 1932	December, 1931, to June, 1932		June, 1920, to June, 1932	June, 1929, to June, 1932	June, 1931, to June, 1932	December, 1931, to June, 1932
Atlanta.....	39.7	22.1	10.0	5.7	Mobile.....	38.5	22.3	10.9	7.7
Baltimore.....	34.2	18.9	9.5	7.1	New Orleans.....	34.0	20.5	7.5	6.7
Birmingham.....	41.1	25.6	11.4	7.5	New York.....	33.9	17.5	7.8	4.7
Boston.....	37.1	19.8	9.9	8.0	Norfolk.....	37.0	18.8	9.2	6.0
Buffalo.....	34.7	19.1	8.6	4.7	Philadelphia.....	35.1	19.9	10.8	7.8
Chicago.....	38.0	22.8	12.3	9.0	Pittsburgh.....	35.2	21.6	10.9	7.6
Cincinnati.....	33.6	19.8	10.4	7.7	Portland, Me.....	34.1	16.9	7.6	5.7
Cleveland.....	35.2	18.8	7.6	4.9	Portland, Oreg.....	38.8	18.6	9.2	7.0
Denver.....	37.7	18.9	9.7	6.6	Richmond.....	35.1	18.3	8.9	7.0
Detroit.....	44.5	26.5	13.0	7.8	St. Louis.....	35.7	20.6	9.9	5.6
Houston.....	38.9	22.0	10.7	8.2	San Francisco.....	33.3	18.3	8.4	5.3
Indianapolis.....	37.8	20.6	9.3	5.8	Savannah.....	40.3	20.5	11.2	6.6
Jacksonville.....	39.2	21.2	10.7	6.3	Scranton.....	33.1	19.8	9.4	6.5
Kansas City.....	39.4	17.6	11.1	7.5	Seattle.....	34.3	17.6	9.3	6.6
Los Angeles.....	33.0	20.0	8.8	6.8	Washington.....	35.7	19.1	9.4	6.8
Memphis.....	36.5	20.5	10.2	6.6	Average, United States.....	37.3	20.3	9.7	6.9
Minneapolis.....	33.7	17.6	9.4	6.9					

In the practice of economy, the bureau is now publishing only the initial figures for the individual cities, for the periods of high prices, and for the 6-month period beginning with June, 1928, through June, 1932. Data on prices for all intervening periods can be obtained from the Monthly Labor Review of August, 1931.

Table 4 shows the per cent of change in the cost of living for 19 cities for each of six groups of items from December, 1914, to June, 1932.

TABLE 4.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1932

	Per cent of increase over December, 1914, in expenditure for—						
City and date	Food	Cloth- ing	Rent	Fuel and light	House- furnish- ing goods	Miscel- laneous	All items
Baltimore, Md.:							
December, 1915.....	14.1	2.7	10.2	0.5	5.6	11.4	11.4
June, 1920.....	110.9	191.3	41.6	57.6	191.8	111.4	114.3
December, 1920.....	75.6	159.5	49.5	79.0	181.9	112.9	96.8
June, 1928.....	52.9	68.1	66.7	82.0	103.2	118.7	73.7
December, 1928.....	51.9	68.3	65.7	87.3	102.0	120.9	73.9
June, 1929.....	53.8	67.5	65.2	80.7	100.4	119.8	73.8
December, 1929.....	56.7	67.2	63.4	86.1	99.4	120.2	75.1
June, 1930.....	47.2	65.9	62.4	80.9	95.6	127.0	71.6
December, 1930.....	36.9	58.1	61.3	85.6	86.0	126.5	65.8
June, 1931.....	18.7	51.6	59.8	78.7	72.1	125.6	55.8
December, 1931.....	14.4	41.9	56.3	83.9	66.8	124.5	51.8
June, 1932.....	11.0	32.7	51.5	67.9	55.6	119.1	41.0
Boston, Mass.:							
December, 1915.....	1.3	6.6	1.1	1.1	8.4	1.6	1.6
June, 1920.....	105.0	211.1	16.2	83.6	233.7	91.8	110.7
December, 1920.....	74.4	192.7	25.8	106.0	226.4	96.6	97.4
June, 1928.....	45.0	80.2	52.2	90.4	123.1	90.2	64.8
December, 1928.....	50.5	80.4	51.6	96.7	118.4	94.4	68.2
June, 1929.....	47.1	79.0	50.7	87.7	118.4	92.1	65.4
December, 1929.....	53.2	79.0	49.2	94.3	118.0	92.9	68.4
June, 1930.....	43.7	78.3	47.1	88.7	113.6	92.5	63.1
December, 1930.....	36.7	72.6	44.7	95.7	107.6	92.3	59.2
June, 1931.....	14.6	66.7	41.8	85.3	97.4	92.3	47.1
December, 1931.....	12.8	58.0	38.4	86.0	89.9	91.3	44.1
June, 1932.....	4.8	49.5	35.1	70.7	72.6	87.9	32.6
Buffalo, N. Y.:							
December, 1915.....	2.4	8.9	1.2	3.2	7.1	3.5	3.5
June, 1920.....	115.7	210.6	46.6	69.8	199.7	101.9	121.5
December, 1920.....	78.5	168.7	48.5	74.9	189.2	107.4	101.7
June, 1928.....	51.6	71.7	72.7	126.7	105.4	117.8	78.7
December, 1928.....	54.9	72.4	69.4	128.5	104.2	117.8	79.6
June, 1929.....	54.6	71.2	67.0	123.2	104.4	118.9	78.8
December, 1929.....	57.9	71.0	66.5	127.0	104.2	119.1	80.0
June, 1930.....	47.2	70.0	65.0	122.9	105.0	120.4	76.0
December, 1930.....	35.8	62.0	62.5	126.7	96.4	118.4	69.4
June, 1931.....	16.0	52.3	56.5	121.3	84.0	116.4	58.3
December, 1931.....	6.7	45.4	50.4	124.8	72.4	114.2	51.8
June, 1932.....	1.3	37.0	39.7	113.8	56.9	110.8	44.7
Chicago, Ill.:							
December, 1915.....	2.7	7.5	1.1	1.9	5.9	3.0	3.0
June, 1920.....	120.0	205.3	35.1	62.4	215.9	87.5	114.6
December, 1920.....	70.5	158.6	48.9	83.5	205.8	96.5	93.3
June, 1928.....	59.4	53.3	86.8	51.2	96.0	98.5	71.5
December, 1928.....	62.4	52.1	83.6	56.5	97.2	101.7	73.1
June, 1929.....	63.0	51.5	80.3	50.7	97.4	101.7	72.3
December, 1929.....	67.3	49.2	77.2	56.7	97.0	102.9	73.7
June, 1930.....	56.9	47.7	75.1	51.5	92.1	104.7	69.1
December, 1930.....	45.6	37.2	71.1	54.8	82.7	104.5	62.2
June, 1931.....	26.7	30.3	64.4	49.5	67.7	103.3	51.8
December, 1931.....	23.1	19.5	56.5	52.5	57.8	98.6	46.2
June, 1932.....	5.4	11.0	38.8	42.1	37.1	94.2	33.1

¹ Decrease.

TABLE 4.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1932—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Cleveland, Ohio:							
December, 1915.....	1.4	2.0	0.1	0.3	4.7	1.4	1.4
June, 1920.....	118.7	185.1	47.3	90.3	186.5	117.9	120.3
December, 1920.....	71.7	156.0	80.0	94.5	176.8	134.0	107.3
June, 1928.....	50.6	65.7	61.8	161.3	90.2	118.1	76.3
December, 1928.....	48.5	63.9	60.5	163.7	89.2	119.0	75.4
June, 1929.....	50.6	63.9	59.5	160.5	89.4	117.9	75.7
December, 1929.....	47.0	63.2	58.9	163.1	88.8	118.3	74.3
June, 1930.....	42.0	61.6	56.4	160.2	87.7	125.3	73.3
December, 1930.....	29.5	52.1	55.3	162.5	75.5	124.2	66.2
June, 1931.....	9.6	41.8	48.6	158.0	64.4	118.6	54.4
December, 1931.....	4.1	36.8	41.0	159.5	58.3	119.0	50.0
June, 1932.....	¹ 6.4	30.2	29.9	156.4	41.6	121.2	42.7
Detroit, Mich.:							
December, 1915.....	4.1	2.3	2.1	1.6	8.7	3.5	3.5
June, 1920.....	132.0	208.8	68.8	74.9	206.7	141.3	136.0
December, 1920.....	75.6	176.1	108.1	104.5	184.0	144.0	118.6
June, 1928.....	53.5	64.3	79.1	73.2	81.4	128.8	76.4
December, 1928.....	55.7	62.5	78.2	77.0	81.2	131.1	77.4
June, 1929.....	59.2	62.5	77.3	72.8	81.2	130.4	78.1
December, 1929.....	57.9	61.7	77.8	77.5	79.4	130.6	77.8
June, 1930.....	47.6	59.6	73.2	67.2	76.7	131.1	72.3
December, 1930.....	32.6	50.2	60.0	71.0	66.5	125.1	61.6
June, 1931.....	14.7	44.0	45.4	61.4	58.8	123.7	50.4
December, 1931.....	7.7	33.1	31.0	59.3	49.3	118.1	41.9
June, 1932.....	¹ 7.7	26.8	17.8	46.2	32.7	116.1	30.9
Houston, Tex.:							
December, 1915.....	¹ 1.0	2.7	¹ 2.3	¹ 1.9	6.1	¹ 1.3	¹ 1.3
June, 1920.....	107.5	211.3	25.3	55.1	213.9	90.4	112.2
December, 1920.....	83.2	187.0	35.1	74.2	208.2	103.9	104.0
June, 1928.....	45.6	85.8	30.4	29.2	132.0	89.7	64.1
December, 1928.....	51.4	86.4	30.1	33.6	131.1	89.3	66.4
June, 1929.....	51.1	84.7	27.5	29.1	129.0	92.1	66.1
December, 1929.....	55.8	84.1	27.1	31.8	129.5	92.5	68.0
June, 1930.....	43.0	82.8	25.7	25.3	127.2	92.5	62.3
December, 1930.....	32.8	65.6	23.8	24.0	113.8	92.3	54.7
June, 1931.....	11.2	63.8	20.0	18.9	110.0	92.1	45.2
December, 1931.....	9.5	52.5	12.3	16.8	99.1	92.9	41.1
June, 1932.....	¹ 7.5	42.0	¹ 2	11.8	87.0	88.5	29.6
Jacksonville, Fla.:							
December, 1915.....	¹ 1.3	10.5	¹ 6.9	(²)	15.1	¹ 1.3	¹ 1.3
June, 1920.....	90.1	234.0	28.9	72.6	224.2	102.8	116.5
December, 1920.....	65.6	209.3	34.1	92.6	222.3	105.6	106.2
June, 1928.....	36.4	85.0	32.3	74.4	119.2	105.1	68.3
December, 1928.....	40.0	84.6	27.4	78.9	119.6	105.1	69.1
June, 1929.....	37.4	83.9	19.8	77.1	117.8	105.1	66.9
December, 1929.....	40.8	82.4	13.2	75.0	113.9	101.0	65.8
June, 1930.....	31.9	80.4	3.2	70.6	110.5	102.4	61.0
December, 1930.....	28.4	71.9	¹ 1.5	66.3	103.3	101.0	56.9
June, 1931.....	8.4	65.4	¹ 5.9	64.0	89.9	100.2	47.4
December, 1931.....	1.4	49.7	¹ 9.7	61.0	81.7	97.6	40.5
June, 1932.....	¹ 10.7	41.3	¹ 15.8	53.4	62.1	92.9	31.6
Los Angeles, Calif.:							
December, 1915.....	¹ 4.1	2.8	¹ 2.7	.4	6.3	¹ 1.9	¹ 1.9
June, 1920.....	90.8	184.5	42.6	53.5	202.2	86.6	101.7
December, 1920.....	62.7	166.6	71.4	53.5	202.2	100.6	96.7
June, 1928.....	34.9	71.4	54.1	56.5	110.7	107.2	67.4
December, 1928.....	44.7	70.5	49.8	51.5	108.4	110.9	71.0
June, 1929.....	41.2	69.3	45.2	50.6	106.5	111.1	68.9
December, 1929.....	40.9	69.3	43.7	51.4	105.9	111.7	68.7
June, 1930.....	30.9	68.1	39.8	45.6	103.6	110.2	63.7
December, 1930.....	21.0	60.2	36.9	47.6	93.0	110.2	58.1
June, 1931.....	3.1	50.7	31.3	47.0	77.8	107.7	48.2
December, 1931.....	5.7	40.0	25.7	46.6	71.2	103.5	45.1
June, 1932.....	¹ 12.0	32.0	15.8	45.3	54.9	102.7	35.2

¹ Decrease² No change.

TABLE 4.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1932—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Cloth- ing	Rent	Fuel and light	House- furnish- ing goods	Miscel- laneous	All items
Mobile, Ala.							
December, 1915.....	11.0	2.0	11.9	(²)	4.1	10.4	10.4
June, 1920.....	110.5	137.4	34.6	86.3	177.9	100.3	107.0
December, 1920.....	73.5	122.2	53.6	122.3	175.4	100.7	93.3
June, 1928.....	45.4	47.5	41.0	90.0	93.3	107.3	63.5
December, 1928.....	49.6	48.1	41.6	92.1	92.3	108.3	65.7
June, 1929.....	47.5	47.2	41.0	84.0	87.9	108.1	64.0
December, 1929.....	49.0	47.2	40.6	85.8	87.3	108.3	64.8
June, 1930.....	39.6	46.8	38.9	81.2	85.6	108.1	60.3
December, 1930.....	33.0	40.0	36.3	58.6	73.5	107.5	54.4
June, 1931.....	12.1	34.1	32.5	49.6	57.5	105.4	43.0
December, 1931.....	7.4	26.2	24.6	49.7	50.6	102.3	38.0
June, 1932.....	10.0	18.9	16.3	42.1	43.5	98.1	27.4
New York, N. Y.:							
December, 1915.....	1.3	4.8	1.1	1.1	8.4	2.0	2.0
June, 1920.....	105.3	241.4	32.4	60.1	235.1	111.9	119.2
December, 1920.....	73.5	201.8	38.1	87.5	185.9	116.3	101.4
June, 1928.....	47.5	90.3	69.3	94.4	97.8	118.6	74.4
December, 1928.....	53.0	88.4	68.6	96.3	96.4	118.8	76.3
June, 1929.....	50.6	87.8	67.6	92.0	96.2	121.4	75.5
December, 1929.....	54.9	85.9	66.1	95.1	95.4	122.9	77.1
June, 1930.....	43.7	85.5	65.1	85.7	90.5	123.3	71.7
December, 1930.....	35.9	82.2	63.1	90.9	85.5	123.7	67.5
June, 1931.....	19.6	67.6	61.5	86.3	62.5	123.5	57.1
December, 1931.....	14.4	56.5	58.4	90.4	52.3	120.6	52.0
June, 1932.....	4.1	51.0	53.0	76.5	44.7	118.6	44.8
Norfolk, Va.:							
December, 1915.....	.8	.8	.1	(²)	.6	.6	.6
June, 1920.....	107.6	176.5	70.8	110.6	165.0	108.4	122.2
December, 1920.....	76.3	153.6	90.8	128.9	160.5	106.3	109.0
June, 1928.....	50.2	71.6	41.7	95.6	85.7	114.6	71.5
December, 1928.....	55.0	71.8	39.6	100.3	86.1	118.2	74.1
June, 1929.....	51.9	71.3	38.8	94.3	85.2	118.0	72.3
December, 1929.....	55.8	70.4	37.1	92.7	83.0	119.3	73.5
June, 1930.....	43.3	68.7	36.0	87.3	80.4	118.6	67.9
December, 1930.....	36.7	66.2	33.3	97.0	73.5	119.0	64.8
June, 1931.....	15.0	57.7	32.6	83.6	63.8	119.0	54.0
December, 1931.....	9.8	46.2	29.3	83.0	56.1	118.3	48.8
June, 1932.....	1.3	38.9	27.0	67.4	47.4	107.8	39.9
Philadelphia, Pa.:							
December, 1915.....	.3	3.6	1.3	1.8	6.9	1.2	1.2
June, 1920.....	101.7	219.6	28.6	66.8	187.4	102.8	113.5
December, 1920.....	68.1	183.5	38.0	96.0	183.4	122.3	100.7
June, 1928.....	51.3	76.5	67.1	81.5	85.4	121.4	75.3
December, 1928.....	51.7	74.0	63.8	87.3	83.9	120.3	74.5
June, 1929.....	50.0	72.6	59.9	85.4	84.1	121.2	73.1
December, 1929.....	56.1	71.2	56.5	86.3	84.7	121.2	75.0
June, 1930.....	42.6	69.7	54.0	86.5	83.2	121.4	69.0
December, 1930.....	34.4	64.9	51.2	95.8	75.3	120.7	64.5
June, 1931.....	20.8	57.6	45.8	80.5	63.2	118.5	55.3
December, 1931.....	17.0	42.0	40.3	91.7	54.1	117.6	50.5
June, 1932.....	.1	33.4	33.7	67.4	43.9	113.2	38.6
Portland, Me.:							
December, 1915.....	12.0	2.1	.2	.4	6.2	1.4	1.4
June, 1920.....	114.5	165.9	14.5	83.9	190.3	89.4	107.6
December, 1920.....	78.7	147.8	20.0	113.5	191.2	94.3	93.1
June, 1928.....	54.2	66.5	21.5	98.4	112.5	88.8	63.8
December, 1928.....	57.0	64.8	20.9	102.4	112.3	97.3	66.6
June, 1929.....	54.3	65.8	19.8	94.1	112.3	97.3	64.8
December, 1929.....	55.7	65.6	19.8	101.9	112.1	97.1	65.8
June, 1930.....	45.9	65.4	19.9	96.9	111.9	97.1	61.5
December, 1930.....	38.5	60.4	19.3	99.9	105.8	95.9	57.2
June, 1931.....	20.5	55.7	17.9	95.3	99.2	95.9	48.2
December, 1931.....	17.2	47.9	17.0	97.3	91.0	95.7	45.1
June, 1932.....	5.2	38.6	15.0	84.1	81.1	94.9	36.9

¹ Decrease.² No change.³ The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

TABLE 4.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO JUNE, 1932—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Portland, Oreg.:							
December, 1915.....	13.8	3.0	10.9	11.0	2.9	13.1	13.1
June, 1920.....	107.1	158.6	33.2	46.9	183.9	79.7	100.4
December, 1920.....	60.9	122.1	36.9	65.9	179.9	81.1	80.3
June, 1928.....	36.6	50.8	20.9	51.6	80.5	76.4	50.5
December, 1928.....	41.8	49.4	16.4	63.0	80.1	78.0	52.4
June, 1929.....	41.4	48.4	11.0	51.4	79.7	77.3	50.7
December, 1929.....	43.7	47.8	8.2	61.8	81.0	77.7	51.6
June, 1930.....	34.2	44.8	5.4	49.7	78.6	86.6	49.1
December, 1930.....	17.8	38.4	2.4	55.5	69.7	85.1	41.5
June, 1931.....	8.2	32.9	11.3	36.4	65.8	83.6	35.2
December, 1931.....	6.0	23.3	16.2	40.1	56.8	82.9	31.9
June, 1932.....	16.9	15.9	13.2	22.9	42.7	79.6	22.7
San Francisco and Oakland, Calif.:							
December, 1915.....	14.3	2.5	10.7	10.1	6.0	11.7	11.7
June, 1920.....	93.9	191.0	9.4	47.2	180.1	79.6	96.0
December, 1920.....	64.9	175.9	15.0	66.3	175.6	84.8	85.1
June, 1928.....	41.5	82.9	35.7	45.9	162.0	79.6	58.8
December, 1928.....	48.0	83.4	33.5	47.5	99.0	83.2	61.7
June, 1929.....	45.1	82.8	31.9	43.7	97.8	83.4	60.1
December, 1929.....	48.7	81.5	30.4	40.3	97.4	82.5	60.8
June, 1930.....	40.4	77.9	28.1	28.7	100.6	80.9	55.9
December, 1930.....	32.0	72.0	26.1	32.0	91.5	82.0	51.5
June, 1931.....	15.8	66.3	24.2	28.8	79.3	79.1	42.8
December, 1931.....	10.3	57.5	20.2	30.6	66.6	78.7	38.1
June, 1932.....	.5	48.7	14.8	25.1	52.9	76.2	30.8
Savannah, Ga.:							
December, 1915.....	1.3	.8	11.4	11.3	1.8	1.2	1.2
June, 1920.....	91.7	212.1	33.5	65.3	207.2	83.8	109.4
December, 1920.....	63.5	171.5	58.6	94.4	206.6	91.5	98.7
June, 1928.....	31.1	68.8	35.9	56.9	120.8	81.9	56.6
December, 1928.....	35.0	69.0	33.9	59.6	118.8	87.0	59.1
June, 1929.....	33.9	68.2	32.7	55.8	117.9	83.8	57.2
December, 1929.....	35.1	67.7	28.3	56.1	117.2	84.5	57.2
June, 1930.....	25.2	66.0	27.0	54.2	113.7	84.7	53.1
December, 1930.....	17.7	61.4	19.6	56.2	110.1	83.8	48.3
June, 1931.....	1.5	58.0	15.8	50.7	98.5	83.8	40.7
December, 1931.....	14.7	44.6	9.5	40.9	89.0	82.3	33.9
June, 1932.....	18.1	35.2	4.0	39.6	79.0	76.8	25.0
Seattle, Wash.:							
December, 1915.....	12.8	1.2	12.4	1.2	8.5	11.0	11.0
June, 1920.....	102.3	173.9	74.8	65.8	221.2	90.4	110.5
December, 1920.....	54.1	160.5	76.7	78.7	216.4	95.5	94.1
June, 1928.....	36.9	68.8	55.5	57.1	133.5	97.4	65.8
December, 1928.....	40.8	68.3	54.1	62.9	132.6	97.4	67.1
June, 1929.....	43.7	66.6	52.4	62.1	131.7	98.8	67.7
December, 1929.....	45.9	66.6	52.1	65.8	132.6	98.8	68.7
June, 1930.....	38.1	64.6	50.1	65.5	132.4	98.6	65.4
December, 1930.....	22.5	59.7	47.8	64.0	128.0	97.6	58.4
June, 1931.....	12.2	55.7	44.4	54.0	114.5	96.6	52.3
December, 1931.....	8.8	45.9	37.5	61.5	103.1	94.6	48.0
June, 1932.....	13.1	35.2	25.3	56.3	83.4	90.5	38.2
Washington, D. C.:							
December, 1915.....	.6	3.7	11.5	(²)	6.3	.4	1.0
June, 1920.....	108.4	184.0	15.6	53.7	196.4	68.2	101.3
December, 1920.....	79.0	151.1	24.7	68.0	194.0	73.9	87.8
June, 1928.....	55.5	67.0	32.7	38.8	102.2	73.6	59.7
December, 1928.....	58.2	65.2	31.0	41.0	99.4	73.8	60.2
June, 1929.....	58.4	64.4	30.5	38.0	100.0	74.0	60.0
December, 1929.....	57.4	62.3	30.0	39.7	100.2	74.3	59.2
June, 1930.....	49.1	60.5	29.7	36.2	100.4	73.8	55.5
December, 1930.....	41.3	55.4	28.7	36.6	93.0	76.8	51.8
June, 1931.....	22.8	49.7	28.2	32.5	86.6	75.7	43.0
December, 1931.....	17.8	39.7	27.9	34.9	79.9	75.3	39.0
June, 1932.....	2.4	28.0	27.1	26.7	61.2	74.6	29.5

¹ Decrease.² No change.³ The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

Table 5 shows the changes in the cost of living from December, 1917, to June, 1932, for 13 cities. The table is constructed in the same manner as the preceding one and differs from it only in the base period and in the length of the time covered.

TABLE 5.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1932

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Atlanta, Ga.:							
December, 1918.....	19.0	29.1	14.0	17.0	24.9	14.8	19.7
June, 1920.....	34.0	80.5	40.4	61.0	65.0	34.6	46.7
December, 1920.....	12.8	56.5	73.1	66.8	58.4	39.7	38.5
June, 1928.....	¹ 1.0	.2	38.9	31.8	15.2	35.6	13.9
December, 1928.....	2.9	.4	38.2	36.3	14.9	35.3	15.6
June, 1929.....	.3	.3	37.5	28.4	14.6	33.0	13.6
December, 1929.....	.1	¹ 1.6	35.9	31.6	14.1	34.2	13.5
June, 1930.....	¹ 7.9	¹ 2.8	32.8	² 11.6	11.2	31.8	7.9
December, 1930.....	¹ 13.1	¹ 6.4	30.8	11.6	8.0	30.5	4.5
June, 1931.....	¹ 24.2	¹ 8.5	28.3	3.6	1.7	28.2	¹ 1.7
December, 1931.....	¹ 29.2	¹ 16.7	19.6	4.8	¹ 5.7	28.7	¹ 6.2
June, 1932.....	¹ 36.6	¹ 21.4	14.6	¹ 2.7	¹ 12.3	28.2	¹ 11.5
Birmingham, Ala.:							
December, 1918.....	17.7	23.9	8.1	22.8	19.4	13.8	17.0
June, 1920.....	36.4	66.4	40.3	55.3	55.6	28.7	41.9
December, 1920.....	11.9	45.1	68.5	74.2	48.1	30.4	33.3
June, 1928.....	¹ 4.7	¹ 4.3	59.4	37.1	13.9	28.2	13.7
December, 1928.....	¹ 2.2	¹ 4.2	54.8	43.4	12.3	27.2	14.2
June, 1929.....	¹ 3.9	¹ 4.3	50.8	35.5	10.6	26.1	12.3
December, 1929.....	¹ 2.8	¹ 5.0	40.8	38.8	10.5	27.2	11.8
June, 1930.....	¹ 8.9	¹ 5.9	35.9	33.2	9.3	26.4	8.2
December, 1930.....	¹ 14.0	¹ 9.1	23.5	38.5	2.7	25.1	3.8
June, 1931.....	¹ 30.6	¹ 13.1	15.1	25.3	¹ 5.4	24.2	¹ 5.6
December, 1931.....	¹ 33.2	¹ 20.1	1.5	24.9	¹ 11.0	24.1	¹ 9.6
June, 1932.....	¹ 40.8	¹ 25.5	¹ 7.6	9.0	¹ 23.4	21.6	¹ 16.4
Cincinnati, Ohio:							
December, 1918.....	15.3	33.8	.2	10.0	25.7	20.4	17.3
June, 1920.....	38.7	96.7	13.6	26.9	75.5	47.6	47.1
December, 1920.....	10.3	73.5	25.0	34.1	66.7	53.4	34.7
June, 1928.....	¹ 1.5	¹ 3.9	57.1	61.1	15.4	49.7	21.0
December, 1928.....	.4	¹ 5.5	57.1	61.6	14.7	49.6	21.2
June, 1929.....	2.5	¹ 5.8	56.9	60.8	13.6	49.7	21.8
December, 1929.....	4.5	¹ 6.4	56.7	70.9	13.1	51.2	23.1
June, 1930.....	¹ 1.2	¹ 7.1	54.5	63.6	11.6	51.5	20.1
December, 1930.....	¹ 8.0	¹ 8.7	52.8	69.7	8.7	49.4	16.6
June, 1931.....	¹ 20.4	¹ 17.5	49.3	59.2	¹ 1.4	51.5	9.1
December, 1931.....	¹ 24.2	¹ 22.4	43.9	64.6	¹ 5.1	50.3	5.8
June, 1932.....	¹ 37.3	¹ 24.3	34.1	54.7	¹ 11.3	48.6	¹ 2.3
Denver, Colo.:							
December, 1918.....	20.0	40.1	12.8	8.1	22.6	14.8	20.7
June, 1920.....	41.5	96.8	51.9	22.3	60.2	35.4	50.3
December, 1920.....	7.9	78.3	69.8	47.1	58.9	38.8	38.7
June, 1928.....	¹ 8.6	8.4	55.8	26.9	20.5	33.4	14.9
December, 1928.....	¹ 6.3	8.2	54.1	39.3	19.8	33.8	16.3
June, 1929.....	¹ 7.4	8.0	52.3	¹ 19.0	17.4	38.8	15.6
December, 1929.....	¹ 6.8	7.9	51.1	29.2	16.0	38.7	16.1
June, 1930.....	¹ 11.9	7.0	49.4	22.6	15.3	38.0	13.0
December, 1930.....	¹ 19.9	5.5	47.8	27.4	12.4	37.6	9.7
June, 1931.....	¹ 28.7	2.3	43.1	7.9	8.1	36.9	3.8
December, 1931.....	¹ 30.6	¹ 6.5	37.1	7.1	¹ 1.2	36.5	.3
June, 1932.....	¹ 38.6	¹ 15.3	28.2	1.2	¹ 9.1	35.8	¹ 6.3
Indianapolis, Ind.:							
December, 1918.....	17.8	32.4	1.6	19.8	18.9	21.9	19.1
June, 1920.....	49.0	87.9	18.9	45.6	67.5	40.5	50.2
December, 1920.....	11.0	72.3	32.9	60.3	63.0	47.5	37.6
June, 1928.....	¹ 1.8	4.3	31.3	29.2	13.7	52.3	18.2
December, 1928.....	¹ 1.3	3.2	30.4	32.3	12.6	52.0	18.5
June, 1929.....	¹ 1.8	3.0	28.4	26.1	12.7	52.3	17.7
December, 1929.....	2.0	2.4	27.9	31.0	11.7	52.0	18.8
June, 1930.....	¹ 2.7	1.2	25.9	24.8	9.0	51.8	16.1
December, 1930.....	¹ 14.2	¹ 1.6	23.9	30.2	5.6	50.4	10.8
June, 1931.....	¹ 26.5	¹ 10.4	16.8	23.8	¹ 3.6	49.5	3.0
December, 1931.....	¹ 29.1	¹ 19.4	11.3	23.7	¹ 12.4	49.2	¹ 1.8
June, 1932.....	¹ 37.6	¹ 22.9	3.4	12.1	¹ 17.0	48.5	¹ 6.6

¹ Decrease.

² The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

TABLE 5.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1932—Continued

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Kansas City, Mo.:							
December, 1918.....	17.3	40.7	5.4	18.0	31.1	15.6	19.6
June, 1920.....	44.9	104.5	29.4	35.2	73.0	37.1	51.0
December, 1920.....	10.2	76.3	63.9	55.1	68.7	40.3	39.5
June, 1928.....	15.4	2.7	24.8	28.7	6.8	35.0	11.2
December, 1928.....	16.0	2.9	23.8	26.8	5.6	37.8	11.3
June, 1929.....	15.3	2.4	21.1	26.3	5.1	37.0	11.0
December, 1929.....	12.2	1.8	20.1	23.9	3.4	36.9	11.7
June, 1930.....	18.6	1.5	19.4	24.0	2.1	36.9	9.0
December, 1930.....	115.8	1.0	19.8	22.0	11.1	44.3	7.7
June, 1931.....	124.9	11.7	17.4	19.7	6.2	44.0	2.9
December, 1931.....	128.9	19.9	16.3	14.3	11.5	42.3	1.1
June, 1932.....	138.7	17.1	8.2	12.0	18.0	37.6	18.5
Memphis, Tenn.:							
December, 1918.....	20.3	27.7	(²)	26.8	25.4	16.1	18.3
June, 1920.....	38.8	77.5	35.9	49.7	67.1	38.8	46.4
December, 1920.....	7.0	59.0	66.2	105.4	53.9	43.2	39.3
June, 1928.....	18.1	1.5	46.3	60.0	16.0	36.9	16.4
December, 1928.....	14.9	.2	43.7	68.8	14.8	37.7	17.5
June, 1929.....	16.0	1.1	42.6	63.6	13.8	38.5	16.8
December, 1929.....	15.1	1.1	40.6	55.3	13.9	38.6	16.5
June, 1930.....	110.6	1.6	39.6	58.9	13.3	39.6	14.7
December, 1930.....	119.2	12.4	35.8	57.9	10.7	38.8	10.4
June, 1931.....	131.3	14.8	29.8	48.3	6.2	35.5	3.4
December, 1931.....	134.2	110.4	18.4	48.3	1.9	35.2	1.5
June, 1932.....	142.3	114.5	11.3	45.9	6.5	29.0	17.1
Minneapolis, Minn.:							
December, 1918.....	17.7	33.5	1.1	14.7	18.1	12.3	15.8
June, 1920.....	50.0	76.7	10.7	36.9	65.5	31.3	43.4
December, 1920.....	13.0	63.6	36.8	60.3	65.8	37.6	35.7
June, 1928.....	1.6	11.1	27.2	45.2	12.3	34.6	15.8
December, 1928.....	.7	11.5	27.5	44.6	10.5	34.5	15.2
June, 1929.....	1.8	11.8	25.6	41.9	10.5	36.7	15.4
December, 1929.....	3.9	12.8	25.2	44.3	10.9	36.6	16.2
June, 1930.....	11.0	13.5	23.6	46.2	10.6	36.3	14.1
December, 1930.....	19.4	14.4	23.5	39.9	7.8	37.0	10.6
June, 1931.....	121.2	18.8	21.4	41.6	3.7	35.4	5.0
December, 1931.....	125.5	116.2	19.8	44.3	12.7	36.1	2.1
June, 1932.....	135.2	123.3	12.1	37.1	12.4	35.6	14.9
New Orleans, La.:							
December, 1918.....	16.6	36.8	(²)	19.7	23.8	15.9	17.9
June, 1920.....	28.6	94.9	12.9	36.3	75.9	42.8	41.9
December, 1920.....	10.7	69.4	39.7	41.5	63.9	57.1	36.7
June, 1928.....	16.8	13.1	55.9	34.5	17.9	46.1	18.2
December, 1928.....	13.2	13.1	54.8	28.4	17.9	46.8	19.5
June, 1929.....	14.3	12.6	53.6	14.9	15.9	45.9	17.8
December, 1929.....	11.8	12.6	51.3	18.1	15.7	45.8	18.8
June, 1930.....	19.8	12.0	49.2	12.4	14.8	46.5	14.8
December, 1930.....	115.0	.1	45.3	14.4	10.2	46.5	10.2
June, 1931.....	130.3	12.7	43.0	6.5	5.9	43.1	1.2
December, 1931.....	130.3	19.7	38.7	4.1	1.5	45.2	.3
June, 1932.....	140.5	113.9	35.4	14.4	8.7	42.6	16.4
Pittsburgh, Pa.:							
December, 1918.....	18.8	35.9	7.6	9.2	26.3	16.3	19.8
June, 1920.....	36.5	91.3	34.9	31.7	77.4	41.2	49.1
December, 1920.....	14.3	75.4	35.0	64.4	78.1	46.3	39.3
June, 1928.....	13.8	4.2	72.8	85.6	15.9	46.9	22.3
December, 1928.....	2.1	3.5	71.6	86.0	16.4	46.9	24.4
June, 1929.....	.6	2.9	68.3	85.6	15.1	48.1	23.2
December, 1929.....	1.2	2.1	67.1	86.0	14.6	47.5	23.2
June, 1930.....	15.6	1.5	64.9	85.1	13.5	47.9	19.9
December, 1930.....	113.4	13.9	63.7	84.4	6.6	47.5	15.2
June, 1931.....	124.2	19.4	56.8	83.1	.4	46.9	8.4
December, 1931.....	129.2	113.3	52.3	83.8	6.4	45.6	4.5
June, 1932.....	138.4	117.0	35.9	81.6	14.5	42.5	13.4

¹ Decrease.² The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.³ No change.

TABLE 5.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO JUNE, 1932—Continued

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous	All items
Richmond, Va.:							
December, 1918.....	20.5	33.8	1.0	11.8	26.3	9.0	17.9
June, 1920.....	36.1	93.6	12.5	36.1	75.4	32.4	43.8
December, 1920.....	11.9	69.0	25.9	62.2	70.0	36.0	33.3
June, 1928.....	¹ 3.8	5.0	30.6	43.9	33.8	41.0	15.3
December, 1928.....	¹ 3.1	5.4	28.9	47.5	32.7	40.9	15.7
June, 1929.....	¹ 5.0	4.2	28.3	42.0	32.4	40.2	14.2
December, 1929.....	¹ 3.4	4.2	27.0	44.7	31.3	41.0	14.9
June, 1930.....	¹ 8.0	3.3	26.5	38.5	30.0	41.3	12.5
December, 1930.....	¹ 14.9	2.0	25.5	42.0	26.6	41.0	9.3
June, 1931.....	¹ 27.2	¹ 2.4	24.4	33.1	18.6	40.6	2.4
December, 1931.....	¹ 29.2	¹ 8.6	21.8	37.6	15.5	40.3	.3
June, 1932.....	¹ 39.2	¹ 13.9	20.0	25.6	2.8	38.3	¹ 6.7
St. Louis, Mo.:							
December, 1918.....	18.0	32.4	2.7	4.8	21.8	14.5	16.7
June, 1920.....	46.2	89.7	29.8	19.6	73.1	37.6	48.9
December, 1920.....	8.8	70.0	42.4	42.6	70.2	43.2	35.4
June, 1928.....	¹ 3.5	3.1	76.3	18.9	21.6	37.2	19.9
December, 1928.....	¹ 2.2	2.5	74.2	23.1	19.5	38.7	20.4
June, 1929.....	¹ .4	1.7	71.8	22.5	17.8	38.4	20.5
December, 1929.....	¹ .5	.8	69.2	33.4	16.2	44.2	21.7
June, 1930.....	¹ 6.7	(⁹)	66.0	21.8	16.9	44.6	18.3
December, 1930.....	¹ 14.9	¹ 1.4	59.5	29.1	15.4	42.1	13.9
June, 1931.....	¹ 24.9	¹ 10.7	53.0	12.4	5.9	41.5	6.2
December, 1931.....	¹ 29.8	¹ 19.2	44.0	20.7	¹ .6	39.2	1.4
June, 1932.....	¹ 38.3	¹ 22.4	34.4	17.4	¹ 8.6	39.1	¹ 4.3
Seranton, Pa.:							
December, 1918.....	21.3	34.4	.5	24.7	27.0	21.4	21.9
June, 1920.....	41.4	97.7	17.2	43.5	62.8	47.9	51.5
December, 1920.....	17.3	76.5	18.5	67.3	62.0	50.4	39.1
June, 1928.....	2.4	16.2	71.7	69.0	30.1	56.2	26.9
December, 1928.....	4.3	15.3	71.7	72.2	29.3	57.8	27.8
June, 1929.....	2.9	15.2	68.1	65.0	26.5	57.5	26.3
December, 1929.....	6.5	13.7	63.9	67.6	26.0	57.3	27.3
June, 1930.....	¹ .8	13.5	60.5	60.2	26.0	57.3	23.5
December, 1930.....	¹ 8.1	10.7	59.1	66.1	22.9	56.8	19.5
June, 1931.....	¹ 20.3	3.9	53.2	61.3	18.2	55.2	11.8
December, 1931.....	¹ 22.8	¹ 7.1	51.8	69.5	7.3	55.2	8.4
June, 1932.....	¹ 32.1	¹ 9.5	43.8	45.3	3.7	52.1	1.3

¹ Decrease.² No change.

Cost of Living in the United States and in Foreign Countries

THE trend of cost of living in the United States and foreign countries for specified months of 1920, 1929, 1930, 1931, and 1932 is shown in the following table. The number of countries included varies according to the information available. Several countries publish a general index and an index number for food only, while others omit clothing, and in some instances also rent. The table shows the trend in the cost of food, clothing, fuel and light, and rent, together with the general index for all items for the countries for which such information is published in the original sources.

Caution should be observed in the use of these figures, since not only are there differences in the base periods and in the number and kind of articles included, and the number of markets represented, but there are also radical differences in the method of construction of the indexes.

INDEX NUMBERS OF **COST OF LIVING** FOR SPECIFIED PERIODS IN THE UNITED STATES AND IN FOREIGN COUNTRIES

Country.....	United States	Canada	Austria, Vienna	Belgium	Czechoslovakia, Prague	Finland	France, Paris	Germany	Ireland	Italy, Milan
Commodities included.....	Food, clothing, fuel and light, rent, house furnishings, etc.	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel, rent, taxes, etc.	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries
Computing agency.....	Bureau of Labor Statistics	Department of Labor	Federal Statistical Bureau	Ministry of Labor and Industry	Office of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Department of Industry and Commerce	Municipal Administration
Base period.....	1913	1913	July, 1914	1921	July, 1914	January-June, 1914	January-June, 1914	1913-14	July, 1914	January-June, 1914
General:										
1920—Av. for year.....	¹ 200.4	¹ 190					³ 341			442.3
1929—June.....	170.2	156	111	212.6		1,215	⁴ 556	153.4	⁶ 173	544.1
December.....	171.4	160	113	227.7		1,207	⁴ 565	152.6	⁶ 179	549.2
1930—June.....	166.6	157	113	224.0	111.1	1,108	⁴ 572	147.6	⁶ 168	530.9
December.....	160.7	151	108	222.5	105.8	1,083	⁴ 597	141.6	⁶ 168	508.3
1931—June.....	150.3	138	106	204.5	106.8	1,020	⁴ 589	137.8	⁷ 156	488.0
December.....	145.8	135	108	193.1	101.6	1,048	⁴ 531	130.4	⁸ 165	472.7
1932—June.....	135.7		109		103.6			121.4	⁷ 159	471.7
Food:										
1920—Av. for year.....	¹ 178.0	¹ 202					³ 344			454.9
1929—June.....	154.8	149	124	207.8		1,103	⁴ 590	154.0	⁶ 164	541.4
December.....	158.0	161	122	227.1		1,090	⁴ 589	152.2	⁶ 173	548.0
1930—June.....	147.9	151	121	201.1	118.1	937	⁴ 593	142.7	⁶ 156	522.5
December.....	137.2	138	111	200.1	109.4	903	⁴ 636	134.8	⁶ 156	499.0
1931—June.....	118.3	111	108	176.5	109.3	842	⁴ 642	130.9	⁷ 139	456.6
December.....	114.3	107	110	160.7	99.1	919	⁴ 555	119.9	⁸ 155	437.8
1932—June.....	100.1		113					113.4	⁷ 144	438.0
Clothing:										
1920—Av. for year.....	¹ 258.5	¹ 232					³ 485			² 692.1
1929—June.....	161.3	157	183	255.8		1,055	⁴ 604	172.4		555.2
December.....	160.5	156	183	262.0		1,051	⁴ 604	170.3		548.8
1930—June.....	158.9	155	183	262.0	133.2	1,046	⁴ 626	166.8		508.8
December.....	153.0	148	177	259.8	119.9	1,034	⁴ 610	149.8		447.7
1931—June.....	146.0	137	162	250.8	111.9	1,004	⁴ 552	139.9		421.2
December.....	135.5	127	166	246.4	105.8	976	⁴ 508	129.1		390.3
1932—June.....	127.8		162					117.2		
Fuel and light:										
1920—Av. for year.....	⁴ 194.9	¹ 200					³ 296			² 611.3
1929—June.....	175.2	157	103	194.3		1,456	⁴ 539	148.9		425.0
December.....	178.7	157	106	212.8		1,455	⁴ 602	152.9		453.1
1930—June.....	172.8	156	104	204.6	121.6	1,407	⁴ 607	149.4		473.0
December.....	175.0	156	104	198.3	121.6	1,290	⁴ 633	151.1		457.4
1931—June.....	165.4	153	104	184.0	119.7	1,067	⁴ 596	145.4		424.3
December.....	168.0	152	104	182.4	119.7	914	⁴ 619	148.8		404.3
1932—June.....	157.1		104					133.8		
Rent:										
1920—Av. for year.....	¹ 151.1	¹ 142					³ 100			² 108.3
1929—June.....	153.7	158	15	223.7		1,476	⁴ 300	126.0		407.6
December.....	151.9	158	22	226.8		1,476	⁴ 350	126.7		410.2
1930—June.....	149.6	160	22	406.0	49.6	1,467	⁴ 350	129.8		410.2
December.....	146.5	160	25	405.0	52.8	1,467	⁴ 350	131.3		422.2
1931—June.....	142.0	158	25	402.5	54.4	1,373	⁴ 350	131.6		473.1
December.....	136.2	158	27	401.0	54.4	1,373	⁴ 360	131.6		482.7
1932—June.....	127.8		28					121.4		

See footnotes at end of table.

INDEX NUMBERS OF COST OF LIVING FOR SPECIFIED PERIODS IN THE UNITED STATES AND IN FOREIGN COUNTRIES—Continued

Country	Netherlands, Amsterdam	Norway	Poland, Warsaw	Sweden	Switzerland	United Kingdom	South Africa	China, Shanghai	India, Bombay	Australia	New Zealand
Commodities included	Food, all commodities	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent	Food, groceries, rent	Food, clothing, fuel, light, rent, sundries
Computing agency	Bureau of Statistics	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Office of Census and Statistics	National Tariff Commission	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period	1911-1913	July, 1914	1927	July, 1914	June, 1914	July, 1914	1914	1926	July, 1914	1923-1927	1926-1930
General:											
1920—Av. for year	1221.6	296		270	224	252	179.0		183		1,019
1929—June	169.0	164	101.7	171	161	160	132.0	105.4	147	1,042	
December	167.4	165	100.4	170	162	167	129.4	111.5	150	1,046	1,003
1930—June	162.1	161	94.0	165	158	154	129.3	120.2	140	996	990
December	156.6	159	93.8	163	156	155	125.8	113.8	121	912	963
1931—June	153.5	151	88.4	160	150	145	123.3	121.0	109	860	913
December	145.2	150	83.3	158	145	148	120.6	121.2	109	814	888
1932—June			81.9	157		142		121.3			
Food:											
1920—Av. for year	1239.7			287		258					
1929—June	165.3	156	94.7	151	155	147	117.6	93.5	144	1,045	
December	161.6	157	91.7	150	157	159	112.4	104.5	148	1,011	1,017
1930—June	151.6	151	80.9	140	151	138	112.0	119.2	137	968	988
December	144.8	149	80.2	137	149	141	108.5	100.8	116	871	922
1931—June	140.6	138	75.9	130	141	127	106.4	99.6	101	833	839
December	125.5	136	69.1	128	134	132	100.4	97.0	101	809	835
1932—June			68.1	125		123					
Clothing:											
1920—Av. for year				390		430					
1929—June		159	106.5	185	167	218		97.0	159		
December		157	108.9	183	165	215		98.8	151		972
1930—June		153	105.8	181	160	213		99.1	138		952
December		148	99.6	178	155	205		99.0	125		924
1931—June		143	81.3	175	145	195		110.2	123		877
December		142	76.4	170	137	190		108.8	117		849
1932—June			73.0	168		190					
Fuel and light:											
1920—Av. for year				372		230					
1929—June		161	127.6	165	134	170		123.8	143		
December		160	134.6	160	135	175		120.2	143		990
1930—June		157	130.5	160	132	170		120.5	143		990
December		150	132.1	156	131	175		119.6	141		994
1931—June		148	131.7	155	127	170		128.3	143		990
December		146	129.2	150	125	175		140.8	145		975
1932—June			128.1	149		170					
Rent:											
1920—Av. for year				130		118					
1929—June		175	131.1	200	181	153		102.2	172		
December		175	134.3	200	181	152		102.4	172		1,019
1930—June		174	154.8	205	185	153		104.5	158		1,012
December		174	170.1	205	185	154		104.5	158		998
1931—June		173	170.1	206	187	154		105.6	158		964
December		173	170.1	206	187	154		107.3	158		922
1932—June			170.1	206		154					

¹ December.
² July.
³ April-June.

⁴ Quarter ending with month.
⁵ April.
⁶ October.

⁷ May.
⁸ November.

Living Expenditures of Illinois Farm and Small-Town Families

AN ANALYSIS of the expenditures of 70 farm families and 18 small-town families, all American born, for various 12-month periods during 1929 and 1930, was published by the University of Illinois Agricultural Experiment Station in the latter part of 1931.¹ The information obtained in the survey for the farm families is given in detail in the report, but that for the small-town families is given only in summary form because of the much smaller number of families covered.

Farm Families

NEARLY half (47 per cent) of the farm families studied owned the land on which their homes were located; 28 per cent owned all of the land they operated and 19 per cent at least half of the land operated. The remaining 53 per cent were living on rented property, 23 per cent renting from relatives, and 30 per cent from nonrelatives. The separation of the records of tenants renting from relatives from those renting from nonrelatives was made to ascertain whether the plane of living was influenced by renting from relatives.

The largest farm consisted of 480 acres and the smallest of 80 acres. Over half (56 per cent) of the families were in the group farming from 161 to 320 acres.

The number of persons per farm family averaged 3.7, the most frequent number being 4. Nineteen per cent of the families had no children, 23 per cent had one child, 43 per cent had two children, 9 per cent had three children, and 6 per cent had four or five children. In several cases relatives living in the home were counted as members of the family.

The most common ages of both husbands and wives were from 28 to 32 years, and the children's ages ranged from 1 to 21, with an average of 10.5 years. Seventy-five per cent of the children were of preschool or grade-school age.

In 66 per cent of the farm homes both husband and wife had attended high school; in 52 per cent at least one of them had attended college, and in 17 per cent both husband and wife were college graduates. They showed a continued interest in education, all wives being members of the home bureaus in their respective counties and the majority of the husbands members of the farm bureaus. An average of eight farm and home papers and magazines per family were received yearly in this group. Eighty-one per cent of the owners, 64 per cent of the tenants renting from relatives, and 77 per cent of the tenants renting from nonrelatives had radios in their homes.

The larger and more modernly equipped homes were those occupied by families renting from relatives, while the houses occupied by owners averaged one room less per house and a smaller percentage of them had lighting systems, furnaces, and running-water equipment. Houses occupied by tenants renting from nonrelatives averaged 7 rooms per house, 30 per cent had lighting systems, 46 per cent furnaces, and 20 per cent running-water equipment. All but one home had a telephone and this one had access to a near-by telephone.

¹ University of Illinois. Agricultural Experiment Station. Bulletin No. 372: Living expenditures of a selected group of Illinois farm and small-town families (1929-30), by Ruth Crawford Freeman and M. Attie Souder.

With an average of 3.7 persons per family, the number of bedrooms was more than adequate, averaging four per house in the groups of owners, and tenants renting from relatives, and three in the group of tenants renting from nonrelatives.

The total yearly money value of the living enjoyed by the 70 farm families ranged from \$1,143 to \$7,342. The average for the whole group was \$2,489, of which \$1,657 represented average cash income per family, \$420 the average value of raised products used in the home or given away (figured at local retail prices), and \$412 the average yearly rental value of the house.

Table 1, compiled from the report, shows the cash and percentage distribution of expenditures of the farm families, under six main heads, in the different ranges of realized income. The term "realized income" as used in the report, represents "(1) net cash from all sources after farm business expenses are subtracted; (2) the retail market value of commodities produced on the farm and used in the home, consisting mainly of food and to a lesser extent fuel; and (3) the rental value of the house occupied by the family."

TABLE 1.—CASH AND PERCENTAGE DISTRIBUTION OF EXPENDITURES OF 70 ILLINOIS FARM FAMILIES IN DIFFERENT RANGES OF REALIZED INCOME

Item	Yearly income					
	\$1,000- \$1,999	\$2,000- \$2,999	\$3,000- and over	Average for all families	Low	High
Number of families in group.....	41	20	9			
Cash expenditures:						
Food.....	\$571	\$735	\$715	\$636	\$427	\$1,306
Shelter—						
House ¹	361	445	572	412	200	750
Repairs and furnishings.....	84	132	195	112	4	515
Clothing.....	138	243	349	195	43	687
Operating expenses.....	135	261	275	189	62	848
Savings and investments.....	116	297	1,312	322	0	4,089
General.....	377	781	1,392	623	116	2,879
Total, per family.....	1,782	2,894	4,810	2,489	1,143	7,342
Per cent spent for:						
Food.....	32	26	15	27		
Shelter and furnishings.....	25	20	16	21		
Clothing.....	8	8	7	8		
Operating expenses.....	7	9	6	7		
Savings and investments.....	7	10	27	12		
General expenses.....	21	27	29	25		

¹ Rental value, figured on basis of 10 per cent of estimated total value of house.

Under the head "operating expenditures" were included fuel, light, power, telephone, ice, laundry, paid service, and small supplies. The report does not itemize the amounts spent for the various items going to make up the operating expenses. "General expenditures" included automobiles, health, education, recreation and entertainment, church, gifts, and personal expenses (shaving supplies, cosmetics, tobacco, dry cleaning, etc.).

In figuring the expenditures for food, the cost of meals for hired farm hands was estimated and subtracted from the total food costs and charged to the farm business. The cost of meals served to hired help used in the home was added to "service." Although children away at school were counted as members of the family, they figured

in the listed food costs only for vacation periods when they were at home. The cost of meals for guests also was deducted from the total food cost.

Among the families with the smaller incomes—from \$1,000 to \$1,999—few differences were found in the average amounts spent for food, operating expenses, clothing, or savings and investments. As the size of the family increased, however, less was spent for shelter and furnishings but expenditures for general purposes tended to increase in direct proportion to the number of members in the family.

In the income group \$1,000 to \$1,999, the cost of food per adult unit tended to decrease in the families of larger size, averaging 43 cents per day in families having 5 members, as compared with 57 cents in families having 2 members. The study did not disclose whether this was due to a lower standard of living or to greater efficiency in buying. In the next larger income group there was a gradual increase in the total cost of food per family with increase in size of family, but little variation in the cost per person. In the group having incomes of \$3,000 and over, the daily cost of food per person (40 cents) was lower than among families in the lowest income-range group, where it was 49 cents per person and 43 cents per adult unit. No true explanation of this was reached, but it is observed in the report that the homemakers in the higher-income group may have bought more intelligently as they were older (average age, 48) and were probably more experienced buyers, and that probably food was bought in larger quantities by the larger families at a consequent lower cost. No information was obtained in the majority of cases as to whether the families studied were adequately fed, but nearly every homemaker had been enrolled in classes on foods and nutrition and should have had the usual knowledge as to planning of adequate meals.

The value assigned to food raised made up 66 per cent, or two-thirds, of the total food cost among the families in the \$1,000 to \$1,999 income group, 63 per cent in the \$2,000 to \$2,999 group, and 54 per cent in the \$3,000 and over group.

Small-Town Families

THE average yearly living expenses of the small-town families (\$3,662) were much higher than those of the farm families (\$2,489), but only one small-town family had an income in the \$1,000 to \$1,999 range and there were 41 farm families in this lower income group.

Savings and operating expenditures were higher for the small-town families. The value of the food consumed, however, was lower than for the farm families, which the report states was probably due partly to the fact that on the farms more abundant supplies of produce were available and partly to the longer hours of active work by the farm families with a consequent larger consumption of food.

Table 2 shows the distribution of expenditures by the small-town families in the different income groups:

TABLE 2.—DISTRIBUTION OF EXPENDITURES OF 18 SMALL-TOWN FAMILIES IN ILLINOIS IN DIFFERENT RANGES OF REALIZED INCOME

Income range	Number of families in group	Average expenditures per family for—						Total
		Savings and investments	Food	Operating expenses	Shelter and furnishings	Clothing	General expenditures	
\$1,000 to \$1,999.....	1	\$211	\$499	\$310	\$71	\$72	\$600	\$1,763
\$2,000 to \$2,999.....	8	501	583	261	223	206	712	2,486
\$3,000 and over.....	9	1,583	630	476	774	348	1,106	4,917
Average of all families.....		1,026	602	371	490	270	903	3,662
Percentage distribution.....		28	16	10	13	8	25	100

General Expenditures, all Families

THE most marked differences in expenditures between the different income groups were found in connection with the items listed under general expenditures, and a more detailed analysis was therefore made of the expenditures listed under this head. Table 3, compiled from the report, shows the average amounts spent for each of these items by both farm and small-town families.

TABLE 3.—DISTRIBUTION OF GENERAL EXPENDITURES OF ILLINOIS FARM AND SMALL-TOWN FAMILIES IN DIFFERENT RANGES OF REALIZED INCOME

Item	Farm families				Small-town families			
	Income group			Average of all families	Income group			Average of all families
	\$1,000—\$1,999	\$2,000—\$2,999	\$3,000 and over		\$1,000—\$1,999	\$2,000—\$2,999	\$3,000—\$3,000 and over	
Number in group.....	41	20	9	-----	1	8	9	-----
Average number of adult units.....	2.9	3.6	4.6	3.7	1.8	3.4	2.5	2.9
General expenditures:								
Personal, for all.....	\$29	\$57	\$145	\$52	\$79	\$82	\$96	\$89
Automobile.....	157	362	331	238	193	171	401	287
Health.....	43	102	247	86	10	140	91	108
Recreation.....	28	47	64	38	72	66	195	131
Education.....	48	90	385	103	27	137	137	131
Church.....	34	51	102	48	3	49	83	64
Gifts.....	38	72	118	58	216	67	103	93
Total.....	377	781	1,392	623	600	712	1,106	903

Clothing Expenditures, all Families

THE expenditures for clothing by the farm and small-town families combined averaged, for boys of preschool age, \$33.79, and for girls, \$29.13; for boys of from 6 to 14 years of age, \$38.15, and for girls, \$37.76; and for boys of high-school age, \$51.66, and for girls, \$93.42. It will be noted that the cost of clothing for boys up to high-school age averaged more than for girls but for those of high-school age was much less than for girls. The report does not show the amounts spent for clothing for adults.

Cost of Living in the Methodist Episcopal Ministry

THE March, 1932, issue of Pension Progress (Chicago), published by the board of pensions and relief of the Methodist Episcopal Church, contains the results of a cost-of-living survey among the clergymen of that church.

The report is based on questionnaires from 1,080 ministers in 29 white English-speaking conferences of the church in the United States. These conferences were chosen because they were representative of the various geographical areas and different economic and social conditions. A larger number of returns was secured from the East and Middle West than from the Far West or South, but this, it is stated, is representative of the distribution both of the general population and of the membership of the Methodist Episcopal Church.

The distribution, by size of place of residence, of the 1,080 ministers who furnished data is shown in the following table:

TABLE 1.—NUMBER AND PER CENT OF MINISTERS LIVING IN PLACES OF CLASSIFIED SIZE

Population	Ministers residing in places with specified population	
	Number	Per cent
Under 500.....	214	19.8
500 to 999.....	183	16.9
1,000 to 2,499.....	192	17.8
2,500 to 4,999.....	111	10.3
5,000 to 9,999.....	82	7.6
10,000 to 24,999.....	66	6.1
25,000 to 49,999.....	49	4.5
50,000 to 99,999.....	40	3.7
100,000 to 249,999.....	59	5.5
250,000 to 499,999.....	17	1.6
500,000 to 999,999.....	12	1.1
1,000,000 and over.....	55	5.1
Total.....	1,080	100.0

It is seen that over half of the ministers were living in places of less than 2,500 population, while nearly two-thirds were in places of less than 5,000. The report points out that this also is typical of the whole pastorate of the church.

Data were obtained not only as to the cash salary of the clergymen but also as to the total income (including fees for professional services, such as for weddings, perquisites of the office, earnings of wife or children, income from lodgers, gifts, etc., and all other income). The average cash salary reported was \$2,081, while the average income was \$2,325. To both of these amounts should be added the value of housing accommodations, either supplied by the congregation or paid for by the minister.

Table 2 shows the distribution, by income groups, of the 1,038 ministers who reported on this point.

It is seen from Table 2 that 43.1 per cent had total incomes, from all sources, of less than \$2,000 a year, 68.7 per cent less than \$2,500, and 80.7 per cent less than \$3,000.

TABLE 2.—NUMBER AND PER CENT OF MINISTERS IN EACH INCOME CLASS

Income group	Ministers with classified incomes	
	Number	Per cent
Under \$999.....	21	2.0
\$1,000 to \$1,499.....	144	13.9
\$1,500 to \$1,999.....	282	27.2
\$2,000 to \$2,499.....	266	25.6
\$2,500 to \$2,999.....	125	12.0
\$3,000 to \$3,499.....	81	7.8
\$3,500 to \$3,999.....	39	3.8
\$4,000 to \$4,999.....	49	4.7
\$5,000 to \$5,999.....	25	2.4
\$6,000 and over.....	6	.6
Total.....	1,033	103.0

Table 3 shows for the three income groups, \$1,000–\$1,499, \$2,000–\$2,499, and \$4,000–\$4,999, and for the whole group of 1,038 families, the distribution of the annual expenditures (except rent, which is not included).

It is seen that in every group, expenditures exceeded the income from all sources, the deficit ranging from 1.5 to 6.9 per cent of the total.

TABLE 3.—ANNUAL EXPENDITURES OF FAMILIES IN SPECIFIED INCOME GROUPS

Item of expenditure	Income group						All groups (average, \$2,325)	
	\$1,000-\$1,499 (average \$1,282)		\$2,000-\$2,499 (average \$2,212)		\$4,000-\$4,999 (average \$4,413)			
	Amount spent	Per cent of total	Amount spent	Per cent of total	Amount spent	Per cent of total	Average amount spent	Per cent of total
Living costs:								
Food.....	\$359.91	26.5	\$494.02	22.3	\$695.14	15.5	\$503.71	21.4
Gas, light, and ice.....	38.48	2.8	66.81	3.0	110.28	2.5	65.49	2.8
House furnishings.....	39.50	2.9	64.47	2.9	131.63	2.9	67.47	2.9
Clothing.....	99.38	7.3	158.66	7.2	362.87	8.1	179.74	7.6
Automobile maintenance.....	161.27	11.9	217.46	9.8	331.89	7.4	216.21	9.2
Automobile purchase.....	43.09	3.2	67.07	3.0	192.46	4.1	81.30	3.4
Medical and dental care.....	59.76	4.4	66.37	3.0	126.57	2.8	68.59	2.9
Other.....	216.17	15.8	367.98	16.1	764.05	17.3	370.25	15.7
All living costs.....	1,013.56	74.8	1,492.84	67.3	2,714.89	60.7	1,552.76	65.9
Advancement costs:								
Benevolences.....	91.31	6.7	171.15	7.7	396.59	8.9	188.42	8.0
Club and lodge dues.....	6.28	.5	13.74	.6	37.95	.8	15.16	.6
Gifts.....	13.61	1.0	33.23	1.5	66.30	1.5	31.93	1.4
Amusements.....	6.24	.5	10.66	.5	29.28	.7	14.78	.6
Vacation and travel.....	23.44	1.7	53.64	2.4	134.51	3.0	61.28	2.6
Tuition.....	22.16	1.6	44.78	2.0	121.59	2.7	57.84	2.5
Books and magazines.....	32.73	2.4	54.04	2.4	104.38	2.3	56.73	2.4
Other.....	7.25	.6	22.72	1.0	26.78	.6	19.19	.8
All advancement costs.....	203.02	15.0	403.96	18.2	917.38	20.5	445.33	18.9
Investment:								
Life insurance.....	85.29	6.3	157.78	7.1	383.85	8.6	169.83	7.2
Installment payments.....	17.91	1.3	47.26	2.1	124.08	2.8	43.00	1.8
Savings.....	24.27	1.8	89.84	4.1	235.28	5.2	109.81	4.7
Other.....	12.47	.9	27.32	1.2	96.21	2.2	34.51	1.5
All investment.....	138.94	10.3	322.20	14.6	839.42	18.8	357.15	15.2
Total expenditures.....	1,355.52	100.0	2,219.02	100.0	4,471.71	100.0	2,355.25	100.0
Not accounted for.....	20.50	1.5	27.33	1.2	32.57	.7	29.83	1.3
Deficit.....	93.92	6.9	34.02	1.5	91.20	2.4	60.52	2.6

¹ Not the exact sum of the items, but as given in the report.

In commenting on this table, the report points out that not only does the expenditure for the various items vary with the income; it is also influenced by the number of persons in the family. Tabulation of 63 families of 2 persons, 76 families of 3 persons, 47 families of 5 persons, and 18 families of 7 or more persons—all in the \$1,500-\$1,999 income group—showed that in the larger families less was spent for insurance than in smaller families, while savings disappeared almost completely, and the total "investment" for families of 7 members or more was less than one-half that found in families of only 2 persons "the decline being progressive through each size of family." The deficit tended to increase with the size of the family.

Municipal Funerals in Milan, Italy

A RECENT report from James W. Gantenbein, American vice consul at Milan, Italy, contains an account of the system of municipal funerals and burials in that city. The system was adopted in 1903 and has also been instituted in several of the smaller towns of Italy. There are five authorized undertakers in Milan whose services are engaged in about 3 or 4 per cent of the funerals, generally in the cases of wealthy people or if transportation to or from the city is involved. In most cases the relatives of the deceased make the necessary arrangements with the municipal and church authorities.

The charges for the services of the professional undertakers vary according to circumstances from about 300 lire (\$15.60) when no arrangements are required outside the city to about 500 lire (\$26) where such arrangements are made.

The municipality provides for four general classifications of funerals, each with a hearse, a plain unfinished wooden casket over which there is thrown a black cloth, and the services of a director and four pallbearers (two pallbearers for a child's funeral). Gratuitous services are provided for paupers. The rates are as follows:

Adults:	Lire
Class 1, grade 1-----	2, 880 (\$149. 76)
Class 1, grade 2-----	2, 250 (\$117. 00)
Class 2, grade 1-----	1, 215 (\$63. 18)
Class 2, grade 2-----	900 (\$46. 80)
Class 2, grade 3-----	630 (\$32. 76)
Class 3, grade 1-----	315 (\$16. 38)
Class 3, grade 2-----	225 (\$11. 70)
Class 3, grade 3-----	180 (\$9. 36)
Class 4-----	110 (\$5. 72)
Children:	
Grade 1-----	540 (\$28. 08)
Grade 2-----	270 (\$14. 04)
Grade 3-----	90 (\$4. 68)
Supplementary carriages for mourners:	
Classes 1 and 2-----	180 (\$9. 36)
Classes 2 and 3-----	135 (\$7. 02)

For transportation to a cemetery in a special covered conveyance in cases of death from contagious diseases, the charges are 180 lire (\$9.36) for an adult and 90 lire (\$4.68) for a child. Special caskets may be obtained for 450 and 540 lire (\$23.40 and \$28.08), cars for mourners for 135 and 180 lire (\$7.02 and \$9.36), casket cushions and

linings from 110 to 315 lire (\$5.72 to \$16.38). No deduction is made where caskets are purchased from outside sources.

When a death occurs, it must be reported within 24 hours. This is usually done by a member of the family, who goes with two witnesses to the Bureau of Vital Statistics, to present a doctor's certificate showing the cause of death. Arrangements for the funeral are made in another office in the same building, and the desired hour for the arrival of the hearse is designated; in winter this must be within 48 hours and in summer within 24 hours of time of death. Funerals begin at 9.30 or 11 a. m., 2 or 4 p. m., on week days; and at 8.30 or 9.45 a. m., 1.30 or 2 p. m., on Sundays and holidays.

Brief services are usually held at the church, after which the body is conveyed to the cemetery. In the types of hearses most commonly employed there are several seats in the front of the conveyance for members of the family. The former custom of the mourners' walking behind the hearse from the church to the cemetery has been discontinued because of traffic conditions. The pallbearers are usually the four attendants provided by the municipality.

The services at the church are divided into definite classes with a published scale of fees, varying from 2,410 lire (\$125.32) for a mass in music, exterior and interior hangings, and the services of 13 priests with torches to 25 lire (\$1.30) for 2 priests with candles.

There are two main cemeteries in Milan owned and operated by the city, one opened in 1866 and the other in 1895. In the former the plots are relatively expensive, owned by the comparatively well-to-do, and the burials are permanent. In the latter, burials are for a term of 10, 20, or 30 years, after which the bones are placed in an ossuary, containing gratuitous and paid-for niches. The costs of permanent plots in the expensive cemetery are 7,200 lire and 8,100 lire (\$374 and \$421) while very small tombs for bodies of children cost 650 lire (\$34). There are special rates for plots containing more than one body. Spaces range from 8,250 to 12,750 lire (\$429 to \$663) if above the ground and 5,500 to 8,500 lire (\$286 to \$442) when underground. In the cheaper cemetery, burial costs 270 lire (\$14) for 10 years, 450 and 540 lire (\$24 and \$28) for 20 years, and 720 lire (\$37) for 30 years, in which case a metal casket must be used. Special rates are provided for bodies brought in from outside the city. Special provisions are made in both cemeteries for the burial of Jews.

Since 1885 facilities for cremation have been offered by a cooperative society. This society performed 144 cremations in 1931 and 120 in 1930. The society makes no charge for cremating bodies of its members who during their life have paid a specified sum for the purpose—125 lire (\$6.50) if well-to-do, or 50 lire (\$2.60) per year if classified as of the working classes. For nonmembers the society charges 400 lire (\$21) if the deceased was a resident of the city, and 600 lire (\$31) otherwise. A fee of 25 lire (\$1.30) is paid the city to cover the services of an attendant.

The municipality received in 1930 from the funeral services and the cemeteries 10,765,000 lire (\$559,780) and spent therefor 4,784,000 lire (\$248,768), omitting, however, interest on the investment.

IMMIGRATION AND EMIGRATION

Statistics of Immigration for May, 1932

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

THE monthly statistics for May show a decrease in the inward, and an increase in the outward movement of aliens, as compared with the previous month. The inward movement of citizens also decreased, but the number of departing citizens increased. In May 13,058 aliens were admitted and 21,839 departed, as against 13,735 and 16,632, respectively, for April. American citizens arriving from foreign countries numbered 19,233, and those departing, 22,152, while in April 23,261 arrived and 19,980 departed.

Of the 13,058 aliens admitted in May, 2,479 were recorded as immigrants and 10,579 as nonimmigrants. Europe supplied 1,449 of the immigrants, nearly three-fourths of whom came from Germany, Great Britain, Italy, Poland, and Scandinavia, while Canada contributed 481 and Mexico 188. Compared with the corresponding month in 1930, which was the last year when immigration was normal, European immigration decreased 89 per cent, Canadian immigration 89 per cent, and Mexican immigration 60 per cent.

Among the aliens who departed in May last were 8,577 emigrants leaving to make their home again in some foreign country. The nationality most largely represented was the Mexican, numbering 2,801, while of the European nations the English numbered 812, German 570, Scandinavian 485, Scotch 465, Italian 372, Spanish 328, and Irish 303. New York State was given as the last permanent residence of 2,672 of these emigrants, while 837 left California, and 582 Texas. Most of those leaving the latter two States were Mexicans. Among the wage-earning emigrants departing this month, 2,675 were common laborers, 1,164 were skilled workers, and 509 were servants; 988 were of the professional, commercial, and miscellaneous classes, and 3,241 had no occupation, being mostly women and children. Over one-half, or 4,715 of these emigrants embarked at New York, destined mainly to European countries.

INWARD AND OUTWARD PASSENGER MOVEMENT, JULY 1, 1931, TO MAY 31, 1932

Period	Inward					Aliens debarred from entering ¹	Outward					Aliens deported after landing ²
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens departed	Total	
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
1931												
July-----	3, 174	12, 361	15, 535	30, 944	46, 479	761	7, 428	20, 450	27, 878	46, 961	74, 839	1, 681
August-----	4, 090	16, 580	20, 670	59, 372	80, 042	657	9, 541	23, 009	32, 550	65, 895	98, 445	1, 584
September----	5, 017	20, 940	25, 957	62, 581	88, 538	684	8, 733	20, 393	29, 126	42, 247	71, 373	1, 446
October-----	3, 913	17, 096	21, 009	32, 427	53, 436	806	10, 857	16, 525	27, 382	35, 016	62, 398	1, 663
November-----	2, 899	9, 832	12, 731	16, 823	29, 554	573	11, 318	14, 271	25, 589	23, 224	48, 813	1, 524
December-----	2, 642	8, 086	10, 728	16, 932	27, 660	485	10, 727	17, 370	28, 097	24, 351	52, 448	1, 336
1932												
January-----	2, 220	7, 242	9, 462	17, 158	26, 620	577	8, 550	14, 693	23, 243	25, 016	48, 259	1, 537
February-----	1, 984	7, 346	9, 330	19, 829	29, 159	392	6, 188	9, 691	15, 879	22, 920	38, 799	1, 505
March-----	2, 103	9, 248	11, 351	22, 012	33, 363	445	6, 239	10, 097	16, 336	24, 718	41, 054	2, 112
April-----	2, 469	11, 266	13, 735	23, 261	36, 996	580	6, 746	9, 886	16, 632	19, 980	36, 612	1, 633
May-----	2, 479	10, 579	13, 058	19, 233	32, 291	540	8, 577	13, 262	21, 839	22, 152	43, 991	1, 597
Total-----	32, 990	130, 576	163, 566	320, 572	484, 138	6, 500	94, 904	169, 647	264, 551	352, 480	617, 031	17, 618

¹ These aliens are not included among arrivals, as they were not permitted to enter the United States.

² These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

DIRECTORIES

Labor Offices in the United States and in Foreign Countries

(Bureaus of labor, employment offices, industrial commissions, State workmen's compensation insurance funds, workmen's compensation commissions, minimum wage boards, factory inspection bureaus, and arbitration and conciliation boards)

United States

Department of Labor:

Hon. W. N. Doak, Secretary.

Hon. Robt Carl White, the Assistant Secretary.

Hon. W. W. Husband, Second Assistant Secretary.

Bureau of Labor Statistics—Charles E. Baldwin, acting commissioner.

Bureau of Immigration—Harry E. Hull, commissioner general.

Bureau of Naturalization—Raymond F. Crist, commissioner.

Children's Bureau—Miss Grace Abbott, chief. Address: Seventeenth and F Streets NW., Washington, D. C.

Employment Service—John R. Alpine, supervising director. Address: 1724 F Street NW., Washington, D. C.

Conciliation Service—Hugh L. Kerwin, director.

Women's Bureau—Miss Mary Anderson, director. Address: 1723 F Street NW., Washington, D. C.

United States Housing Corporation. Address: 1724 F Street NW., Washington, D. C.

Address of all bureaus, except where otherwise noted, 1712 G Street NW., Washington, D. C.

United States Employees' Compensation Commission:

Mrs. Bessie P. Brueggeman, chairman.

Harry Bassett, commissioner.

John M. Morin, commissioner.

Address of commission: Old Land Office Building, Washington, D. C.

Board of Mediation:

Samuel E. Winslow, chairman.

G. Wallace W. Hanger.

Edwin P. Morrow.

Oscar B. Colquitt.

John Williams.

George A. Cook, secretary.

Address of board: Eighteenth and E Streets NW., Washington, D. C.

Alabama

Child welfare commission: B. M. Miller, ex officio chairman, governor.

Child welfare department—

Mrs. A. M. Tunstall, director.

Ruth Scandrett, chief labor inspector.

Mrs. Daisy Donovan, deputy child labor inspector.

Address of commission: State Capitol, Montgomery.

Workmen's compensation division (under bureau of insurance):

Chas. C. Greer, ex officio commissioner, superintendent of insurance.

Frank H. Spears, workmen's compensation clerk.

Address of division: State Capitol, Montgomery.

Board of coal-mine inspectors: W. B. Hillhouse, chief inspector, Birmingham.

United States Employment Service: R. C. Cadden, State director, Room 262, Federal Building, Birmingham.

Alaska

Federal mine inspector: B. D. Stewart, supervising mining engineer, United States Geological Survey, Juneau.

Arizona

Industrial commission:

R. B. Sims, chairman.
W. E. Hunter.
C. W. Hartman.
R. Rand, secretary.
Burt H. Clingan, attorney and referee.
William M. Brawner, industrial agent.
A. C. Kingsley, medical examiner.
Address of commission: Phoenix.

State inspector of mines: Tom C. Foster, Phoenix.

United States Employment Service: H. M. Watson, State director, 235 Ellis Building, Phoenix.

Arkansas

Bureau of labor and statistics:

W. A. Rooksbery, commissioner.
E. I. McKinley, deputy commissioner.
W. F. Sharp, statistician.
J. D. Newcomb, jr., chief boiler inspector.

Industrial welfare commission—

W. A. Rooksbery, ex officio member and chairman.
Mrs. Frank Gibb, secretary.
Claude M. Burrow.
Mrs. C. H. Hatfield.
Elmer Grant.

Address of bureau: State Capitol, Little Rock.

Mine inspection department: Claude Speegle, State mine inspector, Fort Smith.

United States Employment Service:

W. H. Manville, State director, 206 Wallace Building, Little Rock.
W. A. Rooksbery, Federal director, Room 326, State Capitol, Little Rock.

California

Department of industrial relations: Will J. French, director.

Division of industrial accidents and safety—

Will J. French, chairman of industrial accident commission.
Edward O. Allen, member of industrial accident commission.
Meredith P. Snyder, member of industrial accident commission.
C. H. Fry, superintendent of safety.
H. L. White, secretary.
M. R. Gibbons, M. D., medical director.
A. L. Townsend, attorney.

State compensation insurance fund—Frank J. Creede, manager.

Division of immigration and housing—

(Vacancy), chief of division.
Most Rev. E. J. Hanna, D. D., president commission of immigration and housing.
Charles C. Chapman, member commission of immigration and housing.
Melville Dozier, jr., member commission of immigration and housing.
J. Earl Cook, member commission of immigration and housing.
Mrs. Mattie W. Richards, member commission of immigration and housing.

Division of State employment agencies—W. A. Granfield, chief.

Division of labor statistics and law enforcement—Timothy A. Reardon, chief.

Division of industrial welfare—

Mrs. Mabel E. Kinney, chief of division.
B. H. Dyas, chairman of industrial welfare commission.
William R. Kilgore, member of industrial welfare commission.
George Durand, member of industrial welfare commission.
Mrs. Mabel E. Kinney, member of industrial welfare commission.
Mrs. Elizabeth Lloyd Smith, member of industrial welfare commission.

Department of industrial relations—Continued.

Division of fire safety—Jay W. Stevens, chief, 433 California Street, San Francisco.

Address of department: State building, San Francisco.

United States Employment Service:

Walter G. Mathewson, State director, 219-A Post Office Building, San Francisco.

W. A. Granfield, Federal director, 722 Pacific Building, San Francisco.

Colorado

Bureau of labor statistics:

Charles M. Armstrong, secretary of State and ex officio labor commissioner.

M. H. Alexander, deputy labor commissioner and chief factory inspector.

Address of bureau: Denver.

Industrial commission:

Thomas Annear, chairman.

W. H. Young.

William E. Renshaw.

Feay B. Smith, secretary.

DeStelle DeLappe, referee.

State compensation insurance fund: Howard Redding, manager.

Coal-mine inspection department: James Dalrymple, chief inspector, Denver.

Bureau of mines (metal mines): John T. Joyce, commissioner, Denver.

United States Employment Service: Quince Record, State director, 139 New Custom House, Denver..

Connecticut

Department of labor and factory inspection:

Joseph M. Tone, commissioner.

Walter J. Couper, deputy commissioner.

William J. Fitzgerald, deputy commissioner of factory inspection.

State employment offices—Joseph M. Tone, commissioner.

Address of department: State Office Building, Hartford.

Board of compensation commissioners:

Frederic M. Williams, chairman, county courthouse, Waterbury.

Charles Kleiner, 151 Court Street, New Haven.

Charles E. Williamson, 955 Main Street, Bridgeport.

Leo J. Noonan, 54 Church Street, Hartford.

James J. Donohue, 43 Broadway, Norwich.

State board of mediation and arbitration:

Johnstone Vance, New Britain.

Joseph H. Lawlor, Waterbury.

Walter J. Couper, New Haven.

United States Employment Service: Harry E. Mackenzie, State director, County Court House, Danbury.

Delaware

Labor commission:

Miss Helen S. Garrett, chairman.

John H. Hickey.

Newlin T. Booth:

Thomas C. Frame, jr.

George A. Hill.

Miss Marguerite Postles, secretary.

Address of commission: Wilmington.

Child labor division—Charles A. Hagner, chief, Wilmington.

Women's labor division—Miss Marguerite Postles, assistant, Wilmington.

Industrial accident board:

Walter O. Stack, president.

Robert K. Jones.

William J. Swain.

James B. McManus, secretary.

Address of board: Delaware Trust Building, Wilmington.

United States Employment Service: Francis E. B. McCann, State director, Old Federal Building, Sixth and King Streets, Wilmington.

Florida

State labor inspector: John H. Mackey, Jacksonville.

United States Employment Service: James A. Davis, State director, 230 East Forsyth Street, Jacksonville.

Georgia

Department of industrial relations:

Hal M. Stanley, chairman, also commissioner of commerce and labor.

T. E. Whitaker, representing employees.

Max E. Land, representing employers.

Sharpe Jones, secretary-treasurer.

Elizabeth Ragland, assistant secretary.

C. W. Roberts, medical examiner.

H. L. Spahr, chief statistician.

Address of department: Atlanta.

United States Employment Service:

Otto F. Bading, State director, 517 Federal Building, Atlanta.

Cator Woolford, Federal director, 90 Fairlie Street, Atlanta.

Hawaii

City and County of Honolulu

Industrial accident board:

M. Macintyre, chairman.

A. J. Campbell.

A. J. Wirtz.

E. N. Clark.

K. B. Barnes.

A. F. Schmitz, secretary.

County of Maui

Industrial accident board:

W. F. Crockett, chairman.

Dan T. Carey.

Ralph H. Wilson.

Mrs. W. Weddick.

Paul F. Lada.

Mrs. Frances S. Wadsworth, inspector and secretary.

Address of board: Wailuku.

County of Hawaii

Industrial accident board:

Dr. Harold B. Elliot, chairman.

Otto Rose.

Cyril J. Hoogs.

James Webster.

Wm. C. Foster.

Mrs. L. Hazel Bayly, secretary.

Address of board: Hilo.

County of Kauai

Industrial accident board:

J. M. Lydgate, chairman, Lihue.

H. H. Brodie, Hanapepe.

J. B. Fernandez, jr., Kapaa.

J. P. Clapper, Kealia.

G. M. Coney, Lihue.

Idaho

Industrial accident board:

Joel Brown, chairman.

G. W. Suppiger.

Frank Langley.

P. H. Quirk, secretary.

Address of board: Boise.

State insurance fund: P. C. O'Malley, manager, Boise.

Inspector of mines: Stewart Campbell, Boise.

United States Employment Service: Thomas W. McDonough, State director, third floor, Boise City Building, Boise.

Illinois

Department of labor:

Barney Cohen, director.

W. B. McHenry, assistant director.

Address of department: State Capitol, Springfield.

Division of factory inspection—William H. Curran, chief inspector, 608 South Dearborn Street, Chicago.

Division of private employment agencies inspection—John J. McKenna, chief inspector, 608 South Dearborn Street, Chicago.

Division of free employment offices—Frank Unger, State superintendent, State Capitol, Springfield.

General advisory board of the free employment offices—

B. M. Squires, chairman.

A. H. R. Atwood, M. D., secretary (representing employers).

Oscar G. Mayer (representing employers).

John H. Walker (representing employees).

Miss Agnes Nestor (representing employees).

Address of board: 141 West Jackson Boulevard, Chicago.

Industrial commission—

Charles A. Nowak, chairman.

Peter Grieve, jr. (representing employers).

H. H. Willoughby (representing employers).

Charles F. Wills (representing employees).

Edwin R. Wright (representing employees).

Francis A. Horrigan, secretary.

Address of commission: 205 West Wacker Drive, Chicago.

Division of statistics and research—Howard B. Myers, chief, 205 West Wacker Drive, Chicago.

Department of mines and minerals:

John G. Millhouse, director, 315 East Cook Street, Springfield.

Peter Joyce, assistant director, 722 North Grand Avenue west, Springfield.

United States Employment Service: Ralph B. Powers, State director, 116 North Dearborn Street, Chicago.

Indiana

Industrial board:

Roscoe Kiper, chairman.

Harry J. McMillan.

Walter W. Wills.

William A. Faust.

Edgar A. Perkins, sr.

Charles A. Rockwell, secretary.

Department of factories, buildings, and workshops—James E. Reagin, chief inspector.

Department of boilers—James M. Woods, chief inspector.

Department of women and children—Mrs. Jessie Gremelspacher, director.

Address of board: Indianapolis.

Department of mines and mining—Albert C. Dally, chief inspector, Indianapolis.

United States Employment Service:

Clarence W. Baker, State director, Room 416, Federal Building, Indianapolis.

Bert Robinson, Federal director, Room 404, State Capitol, Indianapolis.

Iowa

Bureau of labor statistics: A. L. Urick, commissioner, Des Moines.

State-Federal Employment Service—

George B. Albert, chief clerk, Des Moines.

John W. Holmes, clerk, Sioux City.

Workmen's compensation service:

A. B. Funk, industrial commissioner.

Ralph Young, deputy commissioner.

Ora Williams, secretary.

Dr. Oliver J. Fay, medical counsel.

Address of service: Des Moines.

State bureau of mines:

W. E. Holland, inspector first district, Centerville.
 R. T. Rhys, inspector second district, Ottumwa.
 J. E. Jeffreys, inspector third district, Des Moines.
 Phil R. Clarkson, secretary, Des Moines.

United States Employment Service:

T. L. Taggart, State director, Room 27, Federal Building, Sioux City.
 A. L. Urick, Federal director, Bureau of Labor Statistics, Des Moines.

Kansas

Commission of labor and industry:

G. Clay Baker, chairman.
 Harry C. Bowman, commissioner.
 C. J. Beckman, commissioner.

Address of commission: Statehouse, Topeka.

Department of workmen's compensation—

G. Clay Baker, chairman.
 Harry C. Bowman, commissioner.

Address of department: Statehouse, Topeka.

Department of labor—

C. J. Beckman, Federal director and commissioner of labor in charge of factory and mine inspection, free employment, and women's and children's division.

Address of department: Statehouse, Topeka.

United States Employment Service:

Jay M. Besore, State director, Room 300, Insurance Building, Topeka.
 C. J. Beckman, Federal director, Statehouse, Topeka.

Kentucky

Department of agriculture, labor, and statistics:

Eugene Flowers, commissioner, Frankfort.
 Edward F. Seiller, chief labor inspector, Louisville.
 John W. Rogers, deputy labor inspector, Louisville.
 John M. Hunt, deputy labor inspector, Covington.
 Miss Louie Duncan Brown, deputy labor inspector, Lexington.
 Mrs. Hallie B. Williams, deputy labor inspector, Louisville.

Department of mines: John F. Daniel, chief, Lexington.

Workmen's compensation board:

Davis M. Howerton, chairman, Ashland.
 Harry B. Miller, member, Lexington.
 Ben Petrie, member, Elkton.
 Herbert Carr, referee, Fulton.
 E. A. Taylor, referee, Greenville.
 Tyler Munford, referee, Morganfield.
 Ward Lehigh, referee, Louisville.
 Irvine Turner, referee, Jackson.
 Robert Dixon, jr., secretary, Frankfort.
 A. H. Mitchell, actuary, Fleming.
 Warren Fisher, statistician, Carlisle.

United States Employment Service:

George Baker, State director, third floor, City Building, Central City.

Louisiana

Bureau of labor and industrial statistics:

E. L. Engerran, commissioner.
 Mrs. M. V. Kirby, secretary.

Address of bureau: New Orleans.

United States Employment Service: Charles W. Swallow, State director, 521 Common Street, Shreveport.

Maine

Department of labor and industry: Charles O. Beals, commissioner, Augusta.

Industrial accident commission:

Donald D. Garcelon, chairman.

Earle L. Russell.

Granville C. Gray.

Charles O. Beals (ex officio), commissioner of labor.

Wilbur D. Spencer (ex officio), insurance commissioner

Address of commission: Augusta.

State board of arbitration and conciliation:

Hon. Clarence H. Crosby, chairman, Dexter.

Edward F. Gowell, Berwick.

Charles M. Taylor, 453 Congress Street, Portland.

United States Employment Service:

Harry T. Burr, State director, 142 Free Street, Portland.

Charles O. Beals, Federal director, Statehouse, Augusta.

Maryland

Commissioner of labor and statistics: J. Knox Insley, M. D., 16 West Saratoga Street, Baltimore.

Bureau of mines—John J. Rutledge, chief mine engineer, 22 Light Street, Baltimore.

Mine and examining board—John J. Rutledge, chairman, 22 Light Street, Baltimore.

State industrial accident commission—

Robert H. Carr, chairman.

Omar D. Crothers.

Daniel R. Randall.

Albert E. Brown, secretary.

Miss R. O. Harrison, director of claims.

Robert P. Bay, M. D., chief medical examiner.

Gladys M. Tunstall, statistician.

State accident fund—

James E. Green, jr., superintendent.

Address of commission: 741 Equitable Building, Baltimore.

United States Employment Service:

Raymond W. Bellamy, State director, 411 Customs House, Baltimore.

J. Knox Insley, M. D., Federal director, 16 West Saratoga Street, Baltimore.

Massachusetts

Department of labor and industries:

Edwin S. Smith, commissioner.

Miss Mary E. Meehan, assistant commissioner.

Associate commissioner (constituting the board of conciliation and arbitration and the minimum wage commission)—

Edward Fisher, chairman.

Herbert P. Wasgatt.

John L. Campos.

Veronica A. Lynch, secretary to the commissioner.

Division of industrial safety—John P. Meade, director.

Division of statistics—Roswell F. Phelps, director.

Division of public employment offices—Walter H. Neaves, director.

Division of standards—Francis Meredith, director.

Division of minimum wage—Miss Mary E. Meehan, acting director.

Massachusetts Industrial and Development Commission—M. Joseph McCartin, acting secretary.

Division on the necessities of life—Ralph W. Robart, director.

Address of department: Statehouse, Boston.

Department of industrial accidents:

Joseph A. Parks, chairman.
 Alfred B. Cenedella.
 Edward E. Clark.
 Daniel J. Sullivan.
 Chester E. Gleason.
 Charles M. Stiller.
 Mrs. Emma S. Tousant.
 Robert E. Grandfield, secretary.
 Francis D. Donoghue, M. D., medical adviser.
 Address of department: Statehouse, Boston.

United States Employment Service:

Walter C. Conroy, State director, Young's Hotel Building, 22 Court Street, Boston.
 Edwin S. Smith, Federal director, 473 Statehouse, Boston.

Michigan

Department of labor and industry:

C. M. Woodbury, labor commissioner.
 Samuel H. Rhoads, chairman, compensation commissioner.
 Isabel Larwill, compensation commissioner.
 Arthur R. Sherk, compensation commissioner.
 Leo J. Herrick, statistician.
 John L. Boer, secretary.

Address of department: Lansing.

State accident fund—John W. Haarer, manager.

United States Employment Service:

Henry Irvin, State director, Room 605 Lafayette Building, Detroit.
 C. M. Woodbury, Federal director, State Capitol, Lansing.

Minnesota

Industrial commission:

J. D. Williams, chairman.
 C. R. Carlgren.
 Niels H. Debel.
 J. F. Emme, secretary.
 Emily L. Olson, assistant secretary.
 Division of workmen's compensation—H. O. Halverson.
 Division of accident prevention—A. E. Smith.
 Division of boiler inspection—George Wilcox, chief.
 Division of women and children—Florence A. Burton.
 Division of statistics—Carl E. Dahlquist, chief.

Address of commission: 612 Bremer Arcade, St. Paul.

United States Employment Service: Richard T. Jones, State director, Room 304, Post Office Building, Minneapolis.

Mississippi

Bureau of industrial hygiene and factory inspection:

J. W. Dugger, M. D., director.
 Mrs. Myrtis Clements, secretary.

Address of bureau: P. O. Box 784, Jackson.

United States Employment Service: J. T. Farr, State director, third floor, City Hall Building, Meridian.

Missouri

Department of labor and industrial inspection: Mrs. Amanda D. Hargis, commissioner, Jefferson City.

Workmen's compensation commission:

Evert Richardson, chairman.
 Orin H. Shaw.
 Jay J. James.

William T. Findly, secretary.

Address of commission: Jefferson City.

State bureau of mines:

Frank G. Fenix, chief inspector, Joplin.
John H. Boos, secretary, Jefferson City.
Tolbert Henson, deputy inspector, Perryville.
Chant Gray, deputy inspector, Kirksville.
Herman Beretta, deputy inspector, Lexington.

United States Employment Service:

Otis J. Rogers, State director, 2023 Main Street, Kansas City.
Mrs. Amanda D. Hargis, Federal director, Capitol Building, Jefferson City.

Montana

Department of agriculture, labor, and industry:

A. H. Stafford, commissioner.
Division of labor—Warren W. Moses, chief.
Address of department: Helena.

Industrial accident board:

J. Burke Clements, chairman.
G. P. Porter, State auditor and (ex officio) commissioner of insurance.
A. H. Stafford (ex officio), treasurer of the board.
Gordon G. Watt, secretary.
Harold O. Mead, chief accountant.
Mrs. Nona McRae, clerk.

Bureau of safety inspection—Mrs. Nona McRae, chief clerk.

Address of board: Helena.

United States Employment Service: Stephen Ely, State director, Room 5, Montana Building, Helena.

Nebraska

Department of labor: Cecil E. Matthews, secretary of labor and commissioner.

Bureau of compensation—Cecil E. Matthews, chief.

Address of department: State Capitol, Lincoln.

United States Employment Service: Mrs. Lulah T. Andrews, State director, Room 640, Insurance Building, Omaha.

Nevada

Office of labor commissioner: William Royle, labor commissioner, Carson City.

Industrial commission:

Dan J. Sullivan, chairman.
William Royle.
Alex L. Tannahill.
Vinton A. Muller, M. D., chief medical adviser, Reno. Address of commission: Carson City.

Inspector of mines: A. J. Stinson, Carson City.

J. P. Caulfield, jr., deputy, Las Vegas.

United States Employment Service:

Archie L. Cross, State director, Washoe County Library Building, Reno.
William Royle, Federal director, Room 34, Capitol Building, Carson City.

New Hampshire

Bureau of labor:

John S. B. Davie, commissioner, Concord.
Bion L. Nutting, factory inspector, Concord.
Harold I. Towle, factory inspector, Laconia.
Mary R. Chagnon, factory inspector, Manchester.

State board of conciliation and arbitration:

J. R. McLane (representing public), Manchester.
Walter F. Duffy (representing manufacturers), Franklin.
William J. Cullen (representing labor), Manchester.

United States Employment Service:

Henry A. Tafe, State director, Room 218, Shea Building, Nashua.
John S. B. Davie, Federal director, State Capitol, Concord.

New Jersey

Department of labor: Charles R. Blunt, commissioner.

Bureau of general and structural inspection and explosives—Charles H. Weeks, deputy commissioner of labor.

Bureau of hygiene, sanitation, and mine inspection—John Roach, deputy commissioner of labor.

Bureau of electrical and mechanical equipment—James A. Felton, chief.

Bureau of statistics and records—James A. T. Gribbin, chief.

Bureau of women and children—Mrs. Isabelle M. Summers, director.

Bureau of engineers' license, steam boiler, and refrigerating plant inspection—Joseph F. Scott, chief examiner.

Bureau of workmen's compensation—

Charles R. Blunt, commissioner.

William E. Stubbs, deputy commissioner and secretary.

Charles E. Corbin, deputy commissioner.

John J. Stahl, deputy commissioner.

Daniel A. Spair, deputy commissioner.

John W. Kent, supervisor of informal hearings.

John C. Wegner, referee.

Harry F. Monroe, special investigator.

Frank C. Mobius, special investigator.

Hugh J. Arthur, special investigator.

William J. Wilkie, special investigator.

Harry H. Umberger, special investigator.

Maurice S. Avidan, M. D., medical adviser.

William C. Stuart, M. D., medical adviser.

James C. Keeney, M. D., medical adviser.

Bureau of employment—Russell J. Eldridge, director.

Address of department: Trenton.

United States Employment Service:

Philip Stevenson, State director, Room 760, 1060 Broad Street, Newark.

Charles R. Blunt, Federal director, Statehouse, Trenton.

Russell J. Eldridge, assistant Federal director, Room 757, 1060 Broad Street, Newark.

New Mexico

Labor and industrial commission:

Bonifacio Montoya, chairman, Santa Fe.

Edward Sackett, member, Albuquerque.

Dan Kelly, member, Tumcari.

Labor commissioner—Ralph E. Davy, Santa Fe.

United States Employment Service: Mrs. E. A. Perrault, State director, Court-house, Albuquerque.

New York

Department of labor:

Frances Perkins, industrial commissioner.

Elmer F. Andrews, deputy industrial commissioner.

Maud Swartz, secretary.

Industrial board—

Richard J. Cullen, chairman.

James S. Whipple.

Edward W. Edwards.

Leonard W. Hatch.

Nelle Swartz.

Division of inspection—James L. Gernon, director.

Division of workmen's compensation—

Verne A. Zimmer, director.

Raphael Lewy, M. D., chief medical examiner.

Address of division: 150 Leonard Street, New York.

Division of industrial relations—James Brady, director.

Bureau of mediation and arbitration—A. J. Portenar, chief mediator.

Bureau of aliens—Lillian R. Sire, director.

Division of employment—Fritz Kaufmann, chief, 124 E. 28th Street, New York.

Division of junior placement—Clare L. Lewis, director.

Department of labor—Continued.

Division of industrial codes—

Thomas C. Eipper, referee.

Edward E. J. Pierce, referee.

Division of engineering—William J. Picard, chief, Albany.

Division of industrial hygiene—James D. Hackett, director.

Division of statistics and information—

Eugene B. Patton, director.

S. W. Wilcox, chief statistician, Albany.

Division of women in industry—Frieda S. Miller, director.

State insurance fund—C. G. Smith, manager, 625 Madison Avenue, New York.

General address of department, except where otherwise noted: 80 Centre Street, New York.

United States Employment Service:

Ralph H. Koch, State director, Room 214, No. 641 Washington Street, New York.

Frances Perkins, Federal director, 80 Centre Street, New York.

North Carolina

Department of labor:

Frank D. Grist, commissioner.

Division of statistics—Liston L. Mallard, chief statistician:

Division of standards and inspection—E. F. Carter, director.

Division of service to World War veterans—

Col. John H. Manning, commissioner.

F. A. Hutchison, service officer.

L. B. Flemming, assistant service officer.

Address of department: Raleigh.

Industrial commission:

Matt H. Allen, chairman.

J. Dewey Dorsett, representing employers.

T. A. Wilson, representing employees.

E. W. Price, secretary.

Address of commission: Raleigh.

United States Employment Service:

Nathan A. Gregg, State director, Mint Building, Charlotte.

Frank D. Grist, Federal director, Agricultural Building, Raleigh.

North Dakota

Department of agriculture and labor: Joseph A. Kitchen, commissioner, Bismarck.

Workmen's compensation bureau:

R. E. Wenzel, chairman.

W. H. Stutsman, commissioner.

W. C. Preckel, commissioner.

Carl E. Knudtson, secretary.

Address of bureau: Bismarck.

Minimum wage commission: John Garberick, secretary, Bismarck.

Coal mine inspection department: Edwin R. Rupp, inspector, Bismarck.

United States Employment Service: Roland A. Rottweiler, State director, Room 307, Federal Building, Grand Forks.

Ohio

Department of industrial relations: T. A. Edmondson, director.

Industrial commission—

Wellington T. Leonard, chairman.

L. E. Nysewander.

Thomas M. Gregory.

T. A. Edmondson, secretary.

Division of workmen's compensation—

Lloyd D. Teeters, chief and assistant director, department of industrial relations.

William H. Mahoney, supervisor of claims.

W. K. Merriman, assistant supervisor of claims.

Evan I. Evans, supervisor of actuarial division.

Department of industrial relations—Continued.

Division of workmen's compensation—Continued.

G. L. Coffinberry, auditor and statistician.

H. H. Dorr, M. D., chief medical examiner.

Division of labor statistics and employment offices—John B. Gilbert, chief.

Division of safety and hygiene—

Thomas P. Kearns, superintendent.

Carl C. Beasor, chief statistician.

Division of factory inspection—Edgar W. Brill, chief.

Division of boiler inspection—Carl O. Myers, chief.

Division of examiners of steam engineers—Jos. M. Wirmel, chief.

Division of mines—James Berry, chief.

Address of department: Columbus.

United States Employment Service:

Wm. Robinett, State director, 501 Spahr Building, Columbus.

John B. Gilbert, Federal director, Pure Oil Building, Columbus.

Oklahoma

Department of labor:

W. A. Pat Murphy, commissioner.

James Hughes, assistant commissioner.

Bureau of factory inspection—Fred Kemp, chief inspector.

Division of women and children in industry—

Zelda Harrel, inspector.

Grace Clark, inspector.

Bureau of labor statistics—Adah E. Mauldin, statistician.

Bureau of free employment—

Oklahoma City office (men's division), J. R. McCarty, superintendent.

Oklahoma City office (women's division), Mrs. L. C. Pierce, superintendent.

Tulsa office, E. N. Ellis, superintendent.

Muskogee office, S. A. Reed, superintendent.

Enid office, J. O. Roach, superintendent.

State board of arbitration and conciliation—

W. A. Pat Murphy, chairman.

James Hughes, secretary.

Address of department except where otherwise noted, Oklahoma City.

Industrial commission:

Thomas H. Doyle, chairman.

Matt McElroy, commissioner.

Fred H. Fannin, commissioner.

Chester Napps, secretary.

Nancy Hood, statistician.

Address of commission: Oklahoma City.

United States Employment Service:

Mack Kelly, State director, Room 205, New Municipal Building, Muskogee.

W. A. Pat Murphy, Federal director, State Capitol, Oklahoma City.

Oregon

Bureau of labor:

C. H. Gram, commissioner of labor, Statehouse, Salem.

Chas. H. Elrey, deputy commissioner and attorney, Room 101, Courthouse, Portland.

State welfare commission:

Dorr E. Keasey, chairman.

Mrs. C. W. Hayhurst.

Harry M. Kenin.

C. H. Gram, executive secretary.

Mary K. Brown, investigator.

Address of commission: Room 101, Courthouse, Portland.

State industrial accident commission:

Chas. T. Early, chairman.

Arthur W. Lawrence.

Albert Hunter.

E. W. Rockey, M. D., chief medical examiner, Portland.

Address of commission, except where otherwise noted: Salem.

State board of conciliation:

William L. Brewster, chairman, Failing Building, Portland.
 Charles N. Ryan, 704 Couch Building, Portland.
 William E. Kimsey, 286 Main Street, Portland.

United States Employment Service:

E. J. Stack, State director, Room 101, Courthouse, Portland.
 C. H. Gram, Federal director, Room 101, Courthouse, Portland.

Pennsylvania

Department of labor and industry:

Dr. A. M. Northrup, secretary.
 Charlotte E. Carr, deputy secretary.

Industrial board—

Dr. A. M. Northrup, chairman.
 William B. Rodgers.
 John A. Phillips.
 George W. Fisher.
 Mrs. George B. Wood.
 J. S. Arnold, secretary.

State workmen's insurance board—

Dr. A. M. Northrup, chairman.
 Charles F. Armstrong, insurance commissioner.
 Edward Martin, State treasurer.

State workmen's insurance fund—W. J. Stiteler, jr., manager.

Workmen's compensation board—

Arthur C. Dale, chairman.
 William J. Burchinal.
 Edward J. Hunter.
 Dr. A. M. Northrup, ex officio.
 Bond C. White, secretary.

Bureau, executive—Charlotte E. Carr, deputy secretary.

Bureau of workmen's compensation—J. C. Detweiler, director.

Bureau of employment—S. S. Riddle, director.

Bureau of industrial relations—Stephen Raushenbush, director.

Bureau of industrial standards—John Campbell, director.

Bureau of women and children—Beatrice McConnell, director.

Bureau of inspection—Harry D. Immel, director.

Bureau of rehabilitation—Mark M. Walter, director.

Bureau of statistics—William J. Maguire, director.

Bureau of bedding and upholstery—M. P. Frederick, director.

Address of department: Harrisburg.

Department of mines:

Walter H. Glasgow, secretary.
 Joseph J. Walsh, deputy secretary, anthracite division.
 Richard Maize, acting deputy secretary, bituminous division.
 Address of department: Capitol Building, Harrisburg.

United States Employment Service:

Lewis G. Hines, State director, Room 1005, Gimbel Building, Philadelphia.
 S. S. Riddle, Federal director, 410 South Office Building, Capitol Building, Harrisburg.

Philippine Islands

Bureau of labor (under department of commerce and communications):

Hermenegildo Cruz, director.
 Modesto Joaquin, assistant director.

Administrative division—Rosendo Regalado, acting chief clerk.

Office of the attorney of labor—Bernabe Butalid, attorney.

Conciliation and arbitration division—Mrs. Nieves Baens del Rosario, chief.

Division of inspection and statistics—Andres E. Rivero, acting chief.

Interisland migration division—Gabriel Alba, commissioner.

Marine and employment division—Albino C. Dimayuga, chief.

Accounting division—Julian Yap, accountant.

Address of bureau: Manila.

Puerto Rico**Department of labor:**

Prudencio Rivera Martinez, commissioner.

William D. Lopez, assistant commissioner.

Luis Villaronga, chairman, mediation and conciliation commission.

Address of department: San Juan.

Industrial commission—

Juan M. Herrero, chairman.

M. Leon Parra, commissioner.

F. Paz Granela, commissioner.

Joaquin A. Becerril, secretary.

Address of commission: San Juan.

Rhode Island

Department of labor: Daniel F. McLaughlin, commissioner, Providence.

Office of factory inspectors: J. Ellery Hudson, chief inspector, Providence.

Board of labor (for the adjustment of labor disputes):

Daniel F. McLaughlin, commissioner of labor, chairman.

Edwin O. Chase (representing employers).

William C. Fisher (representing employers).

Albert E. Hohler (representing employees).

Roderick A. McGarry (representing employees).

Christopher M. Dunn, deputy commissioner of labor, secretary.

Address of board: Providence.

United States Employment Service:

Roderick A. McGarry, State director, Room 506, Federal Building, Providence.

Daniel F. McLaughlin, Federal director, Room 318, State Capitol, Providence.

South Carolina

Department of agriculture, commerce, and industries: J. W. Shealy, commissioner.

Labor Division—A. H. Gilbert, jr., chief inspector.

Address of department: 118 State Office Building, Columbia.

Board of conciliation and arbitration:

James C. Self, chairman, Greenwood.

H. E. Thompson, secretary, Batesburg.

W. H. McNairy, Dillon.

United States Employment Service: R. D. McMillan, State director, Florence Trust Building, Florence.

South Dakota

Office of industrial commissioner: D. R. Perkins, industrial commissioner, Pierre.

United States Employment Service: Charles S. Weller, State director, Room 3, Federal Building, Mitchell.

Tennessee**Department of labor:**

Charles H. Love, commissioner and State fire marshal.

Mrs. M. Russell Gray, secretary and chief clerk.

Division of factory inspection—M. F. Nicholson, chief inspector.

Division of mines—A. W. Evans, chief inspector.

Division of hotel inspection—Sam I. Bolton, chief inspector.

Division of workmen's compensation—W. M. Hannah, superintendent.

Address of department: Nashville.

United States Employment Service: Major Robert Nelson Campbell, State director, 215 Post Office Building, Knoxville.

Texas**Bureau of labor statistics:**

Robert B. Gragg, commissioner.

Mrs. Lilyan Davis Smith, secretary.

Marie Nash, assistant secretary.

H. C. Colley, chief deputy.

Address of bureau: Austin.

Industrial accident board:

Earle P. Adams, chairman.
Mrs. Espa Stanford, member.
H. T. Kimbro, member.

Address of board: Austin.

United States Employment Service: Cony Warren Woodman, State director, 247 West Thirteenth Street, Fort Worth.

Utah**Industrial commission:**

William M. Knerr, chairman.
O. F. McShane.
B. D. Nebeker.
Carolyn I. Smith, secretary.

State insurance fund—Charles A. Caine, manager.

Coal mine inspector—John Taylor.

Address of commission: Salt Lake City.

United States Employment Service: A. C. Wilson, State director, 214 Boston Building, Salt Lake City.

Vermont**Office of commissioner of industries:**

Clarence R. White, commissioner, Montpelier.
Charles A. Root, factory inspector, Burlington.

United States Employment Service:

L. L. Lane, State director, Federal Building, Rutland.
Clarence R. White, Federal director, State Capitol, Montpelier.

Virginia**Department of labor and industry:**

John Hopkins Hall, jr., commissioner.
H. W. Furlow, assistant commissioner.
Virginia J. Reynolds, secretary.

Division of mines—A. G. Lucas, chief.

Division of factory inspection—S. A. Minter, chief.

Division of women and children—Carrie B. Farmer, director.

Division of research and statistics—R. H. Barker, director.

Address of department: Richmond.

Department of workmen's compensation, industrial commission:

Parke P. Deans, chairman.
C. G. Kizer.
W. H. Nickels, jr.
W. F. Bursey, secretary.
Wade M. Miles, deputy commissioner, Bristol.
F. P. Evans, statistician.
W. L. Robinson, examiner.

Address of commission except where otherwise noted: State Office Building, Richmond.

United States Employment Service: Walter W. Bryant, State director, Room 5, New Federal Building, Roanoke.

Washington**Department of labor and industries:**

Claire Bowman, director.
H. D. Hailey, secretary.

Division of industrial insurance—

John Shaughnessy, supervisor of industrial insurance and medical aid.
L. L. Goodnow, M. D., chief medical adviser.
John A. Steen, claim agent.

Division of safety—

L. M. Rickerd, supervisor of safety.
W. W. Wilson, mine inspector.
George T. Wake, deputy mine inspector.

Department of labor and industries—Continued.

Division of industrial relations—

L. M. Rickerd, supervisor of industrial relations.
 William J. Coates, assistant supervisor of industrial relations.
 R. M. Van Dorn, industrial statistician.
 Mrs. G. V. Haney, supervisor of women in industry.

Industrial welfare committee—

Claire Bowman, director of labor and industries, chairman.
 John Shaughnessy, supervisor of industrial insurance.
 L. M. Rickerd, supervisor of industrial relations.
 R. M. Van Dorn, industrial statistician.
 Mrs. G. V. Haney, supervisor of women in industry, executive secretary.
 Address of department: Olympia.

United States Employment Service: W. C. Carpenter, State director, Room 421,
 Federal Building, Spokane.

West Virginia

Bureau of labor: Howard S. Jarrett, commissioner, Charleston.

Workmen's compensation department:

Lee Ott, commissioner.
 John T. Moore, assistant to commissioner.
 C. D. Smith, secretary.
 J. E. Brown, attorney.
 J. W. Smiley, actuary.
 Lewis J. Frey, statistician.
 Russel Kessel, M. D., chief medical examiner.

Address of department: Charleston.

Department of mines: R. M. Lambie, chief, Charleston.

United States Employment Service:

Arthur D. Lilly, State director, Public Library Building, Charleston.
 Howard S. Jarrett, Federal director, Public Library Building, Charleston.

Wisconsin

Industrial commission:

Fred M. Wilcox, chairman.
 R. G. Knutson, commissioner.
 Voyta Wrabetz, commissioner.
 A. J. Altmeyer, secretary.

Safety and sanitation department—R. McA. Keown, engineer.

Workmen's compensation department—F. T. McCormick, H. A. Nelson,

A. T. Flint, I. M. Kittleson, H. F. Ohm, examiners.

Apprenticeship department—Walter F. Simon, supervisor.

Woman and child labor department—

Taylor Frye, director.

Miss Maud Swett, field director, Milwaukee.

Statistical department—Orrin A. Fried, statistician.

Address of commission: Madison.

Board of conciliation:

Chris Hochgreve, Green Bay.
 Jacob P. Beuscher, Milwaukee.
 Homer Witzig, Superior.

United States Employment Service:

Roy Empey, State director, Room 331, Federal Building, Milwaukee.
 R. G. Knutson, Federal director, State Capitol, Madison.
 Harry Lippart, assistant Federal director, 511-A West Wells Street,
 Milwaukee.

Wyoming

Department of labor and statistics:

W. E. Jones, commissioner.
 L. T. Cox, deputy commissioner.
 Address of department: Cheyenne.

Child labor board:

W. E. Jones, secretary.
 B. H. McIntosh.
 W. H. Hassed, M. D.
 Address of board: Cheyenne.

Coal-mine inspection department:

Lyman Fern, chief, Rock Springs.
David K. Wilson, deputy, Rock Springs.
R. E. Gildroy, deputy, Sheridan.

Workmen's compensation department (under State treasurer's office):

H. R. Weston, State treasurer.
C. B. Morgan, deputy treasurer.
Arthur Calverley, assistant deputy and department manager.

Address of department: Capitol Building, Cheyenne.

United States Employment Service: Joseph F. Minnick, State director, 405 Conroy Building, Casper.

Foreign Countries**Canada**

Department of Labor:

Hon. W. A. Gordon, minister.
H. H. Ward, deputy minister.
Gerald H. Brown, assistant deputy minister.
M. S. Campbell, chief conciliation officer.
R. A. Rigg, director of employment service.
E. G. Blackadar, superintendent of Dominion Government annuities.
F. A. McGregor, registrar of combines investigation act.
C. W. Bolton, chief of statistical branch.
F. J. Plant, chief of labor intelligence branch.
H. Hereford, Dominion director of unemployment relief.
Address of department: Ottawa, Ontario.

Alberta

Bureau of labor:

W. Snitten, commissioner of labor.
F. W. Hobson, chief boiler inspector.
H. M. Bishop, chief factory inspector.
G. P. Barber, chief theater inspector.
A. A. Millar, chief mine inspector.

Employment service—William Carnill, director.

Minimum wage board—

A. A. Carpenter, chairman.
W. Smitten, commissioner of labor, secretary.

Address of bureau: Administration Building, Edmonton.

Government employment bureau:

William Carnill, director, Edmonton.
L. J. Ricks, superintendent, Calgary.
W. G. Paterson, superintendent, Edmonton.
A. R. Redshaw, superintendent, Lethbridge.
J. W. Wright, superintendent, Medicine Hat.
A. A. Colquhoun, superintendent, Drumheller.

Workmen's compensation board:

Alex Ross, chairman.
Walter F. McNeill, commissioner.
James A. Kinney, commissioner.
Frederick D. Noble, secretary.

Address of board: Administration Building, Edmonton.

British Columbia

Department of labor:

Hon. W. A. McKenzie, minister.
Adam Bell, deputy minister.
H. Douglas, chief factories inspector, Vancouver.

Employment service—J. H. McVety, general superintendent, Vancouver.

Minimum wage (for females) board—

Adam Bell, deputy minister of labor, chairman.
Mrs. Helen G. MacGill.
Thomas Mathews.

Miss Mabel Agnes Cameron, secretary.

Hours of work and minimum wage (for males) board—Adam Bell, deputy minister of labor, chairman.

Address of department except where otherwise noted: Parliament Building, Victoria.

Workmen's compensation board:

E. S. H. Winn, K. C., chairman.
 Parker Williams, commissioner.
 Hugh B. Gilmour, commissioner.
 F. P. Archibald, secretary.
 R. B. Fulton, assistant secretary.

Old-age pensions department—H. L. Greenwood, secretary.

Boilers and machinery inspection department—A. S. Bennett, chief inspector.

Electrical energy inspection department—H. L. Taylor, chief inspector.

Address of board: 411 Dunsmuir Street, Vancouver.

Manitoba

Bureau of labor:

W. R. Clubb, minister of public works.
 Edward McGrath, secretary.
 Arthur MacNamara, assistant deputy minister of public works.

Fair wage board—

Arthur MacNamara.
 J. W. Morley.
 E. Claydon.
 Thomas J. Williams.
 C. J. Harding.

Minimum wage board—

George N. Jackson, chairman.
 Mrs. Edna M. Nash.
 James Winning.
 E. R. Kennedy.

Address of bureau: Winnipeg.

Workmen's compensation board:

C. K. Newcombe, commissioner.
 George E. Carpenter, director.
 J. L. McBride, director.
 A. J. Fraser, M. D., chief medical officer.
 Nicholas Fletcher, secretary.
 P. V. E. Jones, assistant secretary.

Address of board: Winnipeg.

New Brunswick

Department of Labor: H. I. Taylor, minister, St. George.

Workmen's compensation board:

John A. Sinclair, chairman.
 Frank C. Robinson, vice chairman.
 R. B. Irving, acting commissioner.

Department of factory inspection—John Kenney, inspector.

Address of board: St. Johns.

Nova Scotia

Department of public works and mines:

Colonel, the Hon. Gordon S. Harrington, premier and minister.
 Norman McKenzie, deputy minister.
 Address of department: Halifax.

Workmen's compensation board:

F. L. Milner, K. C., chairman.
 Fred W. Armstrong, vice chairman.
 John T. Joy, commissioner.
 Dr. M. D. Morrison, medical officer.
 John McKeagan, assessment officer.
 N. M. Morison, claims officer.
 Miss M. M. Skerry, secretary.

Address of board: Halifax.

Employment service:

C. J. Cotter, superintendent men's division, Halifax.
 Miss Elda E. Caldwell, superintendent women's division, Halifax.

Ontario

Department of labor:

Hon. J. D. Monteith, minister.
A. W. Crawford, deputy minister.
D. M. Medcalf, chief inspector of steam boilers.
James T. Burke, chief inspector of factories.
J. M. Brown, chairman, board of examiners of operating engineers.
H. C. Hudson, general superintendent, Ontario government employment offices.
A. W. Crawford, chief inspector of apprenticeship.
Address of department: East Block, Parliament Buildings, Toronto.

Minimum wage board:

R. A. Stapells, chairman.
H. G. Fester.
Miss Margaret Stephen.
Address of board: East Block, Parliament Buildings, Toronto.

Workmen's compensation board:

Victor A. Sinclair, K. C., chairman.
Henry J. Halford, vice chairman.
George A. Kingston, commissioner.
N. B. Wormith, secretary.
T. Norman Dean, statistician.
F. W. Graham, claims officer.
D. E. Bell, chief medical officer.
J. M. Bremner, medical officer.
J. F. Hazelwood, medical officer.
Address of board: Metropolitan Building, Toronto.

Quebec

Department of labor:

Hon. C. J. Arcand, minister, Montreal.
Gerard Tremblay, deputy minister, Parliament Buildings, Quebec.
Alfred Robert, chief inspector of industrial establishments and public buildings, 97 Notre-Dame Street east, Montreal.
Clovis Bernier, deputy chief inspector, 97 Notre-Dame Street east, Montreal.
J. N. Mochon, chief examiner of the board of electrical examiners, 88 St. James Street east, Montreal.
N. S. Walsh, chief examiner of the board of stationary engineers, 88 St. James Street east, Montreal.
Maxine Morin, K. C., registrar of the board of conciliation and arbitration, Parliament Buildings, Quebec.
Joseph Ainey, general superintendent of provincial employment bureau, 97 Notre-Dame Street east, Montreal.
Achille Latreille, fair wages officer, 97 Notre-Dame Street east, Montreal.
Pierre A. Gosselin, fair wages officer, 231 St. Paul Street, Quebec.

Women's minimum wage commission—

Gustave Francq, chairman, 89 Notre-Dame Street east, Montreal.
Alfred Crowe, secretary, 229 St. Paul Street, Quebec.

Workmen's compensation commission:

Robert Taschereau, K. C., chairman.
Simon Lapointe, K. C.
O. E. Sharpe.
O. G. Molleur, secretary.
Address of commission: 73 Grande Allee, Quebec.

Saskatchewan

Department of railways, labor, and industries:

Hon. J. A. Merkley, minister.
Thomas M. Molloy, deputy minister.
D. McDonald, chief boiler inspector.
W. H. Hastings, mines inspector.
Gerald E. Tomsett, general superintendent of employment service.
Address of department: Farmers' Building, Regina.

Minimum wage board:

A. J. Wickens, K. C., chairman, Moose Jaw.
 Mrs. Ethel Henderson, Moose Jaw.
 Mrs. Grace Chandler, Regina.
 Ralph Heseltine, Regina.
 Stanley Edwards, Saskatoon.
 Thomas M. Molloy, secretary, Regina.

Workmen's compensation board:

N. R. Craig, K. C., chairman.
 Robert S. Banbury, commissioner.
 Alfred Higgin, commissioner.
 Address of board: 7 Farmers' Building, Regina.

Other Foreign Countries**Albania.**

Ministry of Public Works.
 Address: Tirana.

Argentina.

Ministerio del Interior (Ministry of the Interior).
 Departamento Nacional del Trabajo (National Labor Department).
 Address of ministry: Buenos Aires.

Australia.

Commonwealth Bureau of Census and Statistics.
 Address: Melbourne.

Austria.

Bundesministerium für soziale Verwaltung (Federal Ministry of Social Administration).
 Address: 1 Hanuschgasse 3, Vienna.

Belgium.

Ministère de l'Industrie, du Travail et de la Prévoyance sociale (Ministry of Industry, Labor and Social Welfare).
 Address: 12 Rue Lambermont, Brussels.

Bolivia.

Departamento Nacional del Trabajo (National Labor Office).
 Address: La Paz.

Brazil.

Ministerio da Agricultura, Industria et Comercio (Ministry of Agriculture, Industry, and Commerce).
 Address: Rio de Janeiro.

Bulgaria.

Ministerstwo na Tyrgowiata, Promyshlenosta i Trouda (Ministry of Commerce, Industry, and Labor).
 Address: Rue Alaninska, 48, Sofia.

Chile.

Ministerio de Bienestar Social (Ministry of Social Welfare).
 Address: Santiago.

China.

Ministry of Industry, Commerce, and Labor.
 Department of Labor.¹
 Address of ministry: Nanking.

Colombia.

Ministerio de Industrias (Ministry of Industries).
 Oficina General del Trabajo (General Labor Office).
 Address of ministry: Bogota.

Costa Rica.

Secretaría de Fomento (Ministry of Public Works).
 Address: San Jose.

Cuba.

Secretaría de Agricultura, Comercio y Trabajo (Secretariat of Agriculture, Commerce, and Labor).
 Address: Habana.

Czechoslovakia.

Ministerstvo socialni péče (Ministry of Social Welfare).²
 Address: Valdstynska, 10, Prague, III.
 Ministerstvo veřejných prací (Ministry of Public Works).³
 Address: Presslova, 6, Prague-Smichov.

¹ Three sections dealing with labor organizations, labor legislation, and social welfare, respectively.

² Handles labor relations at large.

³ Labor questions relating to workers in mines; insurance statistics.

Denmark.

Socialministeriet (Social Ministry).

Arbejderforsikrings-raadet (Workmen's Compensation Board).

Address: 3 Kongens Nytorv, Copenhagen.

Arbejdsraadet (Labor Board).

Address: 25 Amaliegade, Copenhagen.

Direktoratet for arbejds- og fabriktilsynet (Labor and Factory Inspection Department).

Address: 25 Amaliegade, Copenhagen.

Dominican Republic.

Departamento de Trabajo (Department of Labor).

Address: San Domingo.

Dutch East Indies.

Department of Justice.

Kantoor van arbeid (Labor Bureau).

Address of department: Batavia, Java.

Ecuador.

Ministerio de Previsión Social y Trabajo (Ministry of Public Welfare and Labor).

Address: Quito.

Egypt.

Ministry of Interior, Council of Arbitration.

Department of Labor.⁴

Address of ministry: Cairo.

Estonia.

Töö-ja Hoolekande-Ministeerium (Ministry of Education and Social Welfare).

Address: Tallinn.

Finland.

Sosiaaliministeriö (Ministry of Social Affairs).

Address: Helsingfors.

France.

Ministère du Travail et de l'Hygiène (Ministry of Labor and Hygiene).

Address: Rue de Grenelle, 127, Paris.

Germany.

Reichsarbeitsministerium (Ministry of Labor).

Address: Scharnhorststrasse, 35, Berlin NW., 40.

Great Britain.

Ministry of Labour.

Address: Montague House, Whitehall, London, SW., 1.

Greece.

Ministère de l'Économie nationale (Ministry of National Economy).

Direction du Travail et de la Prévoyance sociale (Directorate of Labor and Social Welfare).

Address of ministry: Rue Valaoritou, 3, Athens.

Guatemala.

Ministerio de Fomento (Ministry of Public Works).⁵

Ministerio de Agricultura (Ministry of Agriculture).⁶

Address of both: Guatemala.

Haiti.

Department of Labor.

Address: Port au Prince.

Honduras.

Ministerio de Fomento, Obras Públicas y Agricultura (Ministry of Public Works and Agriculture).

Address: Tegucigalpa.

Hungary.

Magyar Kir. Népjóléti és Munkaügyi Minisztérium (Ministry of Social Welfare and Labor).

Address: Kyrályi Palota, Budapest.

Statisztikai hivatal (Government Statistical Office).

Address: II Keleti Karoly utca 5, Budapest.

India.

Department of Industries.

Address: Delhi.

Labor Office of the Government of Bombay.

Address: Bombay.

⁴ Handles all matters pertaining to labor.

⁵ Handles questions relating to urban labor matters.

⁶ Handles questions relating to rural labor matters.

- Irish Free State.**
Department of Industry and Commerce.
Address: Government Building, Dublin.
- Italy.**
Ministero delle Corporazioni (Ministry of Corporations).
Address: Rome.
- Japan.**
Shakai Kyoku (Bureau of Social Affairs).
Address: Tokyo.
- Latvia.**
Ministry of Public Welfare.
Address: Riga.
- Lithuania.**
Vidaus Reikalų Ministerija (Ministry of Home Affairs).
Address: Kaunas.
- Luxemburg.**
General Directorate of Agriculture, Industry, and Social Welfare.
Division of commerce, industry, and labor.
Address of directorate: Luxemburg City.
- Mexico.**
Departamento de Industria, Comercio y Trabajo (Department of Industry, Commerce, and Labor).
Address: Avenida Republica Argentina, N. 12, Mexico City.
- Netherlands.**
Ministerie van Arbeid, Handel, en Nijverheid (Ministry of Labor, Commerce, and Industry).
Address: Beznidenhout, The Hague.
- New Zealand.**
Department of Labour.
Address: Wellington.
- Nicaragua.**
Ministerio de Fomento (Ministry of Public Works).
Address: Managua.
- Norway.**
Departmentet for Social Saker (Ministry of Social Affairs).
Address: Viktoria terrasse, 11-13, Oslo.
- Panama.**
Ministerio de Agricultura y Obras Públicas (Ministry of Agriculture and Public Works).
Address: Panama.
- Paraguay.**
Ministerio del Interior (Ministry of the Interior).
Address: Asuncion.
- Persia.**
Ministry of Commerce, Agriculture, and Public Works.
Address: Teheran.
- Peru.**
Ministerio de Fomento (Ministry of Public Works).
Address: Lima.
- Poland.**
Ministerstwo Pracy i Opieki Społecznej (Ministry of Labor and Social Welfare).
Address: Place Dombrowski, 1, Warsaw.
- Portugal.**
Ministerio do Comércio e Comunicações (Ministry of Commerce and Communications).
Address: Lisbon.
- Rumania.**
Ministerul Muncii, Sanatatii si Ocrotirilor Sociale (Ministry of Labor, Health, and Social Welfare).
Address: Bucharest.
- Salvador.**
Ministerio de Fomento, Agricultura, Gobernacion y Trabajo (Ministry of Public Works, Agriculture, and Labor).
Address: San Salvador.
- Slam.**
Ministry of Commerce and Communications.
Board of Commercial Development.⁷
Address of ministry: Bangkok.
- Spain.**
Departamento de Trabajo (Ministry of Labor).
Address: Madrid.

⁷ Deals with labor matters.

Sweden.

Socialdepartementet (Ministry of Social Affairs).

Socialstyrelsen (Social Board).

Address of ministry: Mynttorget 2, Stockholm.

Switzerland.

Volkswirtschaftsdepartement (Federal Department of National Economy).

Arbeitsamt (Federal Labor Office).

Address of department: Palais Fédéral, Berne.

Turkey.

Ministry of Economy.

Address: Ankara (Angora).

Union of South Africa.

Department of Labour.

Address: Pretoria.

Uruguay.

Ministerio de Industrias (Ministry of Industries).

Oficina Nacional de Trabajo (National Labor Office).

Address of ministry: Montevideo.

Venezuela.

Ministerio de Fomento (Ministry of Public Works).

Address: Caracas.

Yugoslavia.

Ministarstvo Socijalne Politike (Ministry of Social Policy).

Address: Belgrade.

PUBLICATIONS RELATING TO LABOR

Official—United States

ILLINOIS.—Department of Labor. *Thirteenth annual report, July 1, 1929, to June 30, 1930. Springfield, 1931. 209 pp., charts.*

The report includes information on the activities of the division of free employment offices, the division of factory inspection, and the industrial commission, and gives statistics on employment, building, industrial accidents, and workmen's compensation. The data relating to workmen's compensation are reviewed in this issue of the Labor Review.

MISSOURI.—Bureau of Mines. Department of Inspection. *Forty-fourth annual report, year ending December 31, 1931. Jefferson City, [1932]. 95 pp.*

Includes data relating to accidents, production, and wages.

NEW YORK.—Board of Housing. *Report. Albany, 1932. 80 pp., charts. (Legislative document (1932), No. 84.)*

Information on tax exemption and low-cost housing in New York City, taken from the report, is given in this issue of the Labor Review.

—Joint Legislative Committee on Unemployment. *Preliminary report, transmitted to the Legislature February 15, 1932. Albany, 1932. 197 pp., charts. (Legislative document (1932) No. 69.)*

Reviewed in this issue.

NORTH CAROLINA.—Industrial Commission. *Papers presented at the second annual state-wide industrial safety conference, Charlotte, November 5 and 6, 1931. Charlotte, [1932?]. 113 pp.*

WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION.—Committee on Milk Production and Control. *Milk production and control: Communicable diseases, public health supervision, nutritional aspects, economic aspects. New York, Century Co., 1932. 392 pp.*

—Committee on National, State, and Local Organization for the Handicapped. *Organization for the care of handicapped children. New York, Century Co., 1932. 365 pp.*

—Committee on Socially Handicapped. *The delinquent child. New York, Century Co., 1932. 499 pp.*

Outlines a series of minimum needs which the committee feels are essential for the child's happiness and for his living a wholesome life.

WYOMING.—Workmen's Compensation Department. *Sixteenth report, for the 12 months ending December 31, 1931; sixth report, Coal Mine Catastrophe Insurance Premium Fund; ninth report, Wyoming Peace Officers' Indemnity Fund. Cheyenne, [1932]. 164 pp.*

The data given on workmen's compensation are reviewed in this issue of the Labor Review.

UNITED STATES.—Congress. House of Representatives. *Report No. 898 (72d Cong., 1st sess.), to accompany H. R. 4743: Vocational rehabilitation. Report of Mr. Douglass, of Massachusetts, from Committee on Education. Washington, 1932. 5 pp.*

UNITED STATES.—Congress. Committee on Education. *Vocational rehabilitation. Hearing (72d Cong., 1st sess.), January 21–23, 1932, on H. R. 4743, a bill to amend an act entitled, "an act to provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment," approved June 2, 1920, as amended. Washington, 1932. 124 pp.*

— Senate. Committee on Mines and Mining. *Hearings (72d Cong., 1st sess.) on S. 2935, a bill to regulate interstate and foreign commerce in bituminous coal; provide for consolidations, mergers, and cooperative marketing; require the licensing of corporations producing and shipping coal in interstate commerce; and to create a bituminous coal commission; and for other purposes, March and April, 1932. Part 1. Washington, 1932. 342 pp.*

— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 553: Fluctuation in employment in Ohio, 1914 to 1929. Washington, 1932. 585 pp.*

Summary figures on employment in Ohio during the year 1930 were published in the *Labor Review* for March, 1932 (pp. 516–528).

— Government Printing Office. *Children's Bureau and other publications relating to children. List of publications relating to above subjects for sale by Superintendent of Documents. Washington, 1932. 14 pp. (Price list 71, fourteenth edition.)*

Official—Foreign Countries

AUSTRALIA.—Bureau of Census and Statistics. *Wages and prices: A short examination of the accuracy of the retail price index number used in the adjustment of wages (second edition, revised). Canberra, December, 1931. 20 pp.*

AUSTRIA.—Bundesamt für Statistik. *Statistisches Handbuch für die Republik Österreich. Vienna, 1931. 223 pp.*

Includes statistics of trade agreements, wages, unemployment, unemployment insurance and relief, industrial disputes, labor unions, accidents, invalidity and old-age insurance, cooperative societies, etc.

DENMARK.—*Arbejdsløshedslovgivningen i Danmark, gennem 25 aar 1907–1932. Copenhagen, 1932. 208 pp., illus.*

A historical review of the legislation on matters connected with unemployment in Denmark during 1907 to 1932. Statistical data are included showing the number of unemployment insurance funds and their membership, number of beneficiaries, income and expenditures, etc.

— [Socialministeriet.] *Beretning om arbejds- og fabriktilsynets virksomhed i aarene 1929–1931. Copenhagen, 1932. 30 pp. (Reprint from Socialt Tidsskrift, May, 1932.)*

Report on factory inspection in Denmark during 1929–1931.

— Statistiske Departement. *Arbejdsløsheden i aarene 1925–1930. Copenhagen, 1932. 127 pp., chart. (Statistiske Meddelelser, 4 række, 88 bind, 4 hæfte.)*

Contains statistical information in regard to unemployment in Denmark during the years 1925 to 1930.

GREAT BRITAIN.—Department of Overseas Trade. *Economic conditions in Belgium in 1931, together with an annex on the Grand Duchy of Luxemburg, by N. S. Reyniens. London, 1932. 138 pp.*

The bulletin contains a chapter on social questions, covering family allowances, housing, strikes, unemployment, cooperative societies, and cost and standards of living. Some data on wages are given in connection with the discussion of different industries.

GREAT BRITAIN.—Mines Department. *Miners' Welfare Fund: Tenth report of the committee appointed by the board of trade to allocate the fund, together with the fifth report of the selection committee appointed to administer the miners' welfare national scholarship scheme, 1931. London, 1932. 116 pp., illus.*

— Ministry of Labor. Unemployment Grants Committee. *Report for the period September 1, 1930, to December 31, 1931. London, 1932. 11 pp. (Cmd. 4029.)*

HAMBURG (GERMANY).—Statistisches Landesamt und Landeswahlamt. *Statistische Mitteilungen über den hamburgischen Staat, Nr. 26: Die Lebenshaltung der wirtschaftlich schwachen Bevölkerung in Hamburg in den Jahren 1925 bis 1929, insbesondere im Jahre 1927. Hamburg, 1931. 64 pp.*

This study of cost of living of working-class families in Hamburg, Germany, was summarized in the Labor Review for July, 1932 (p. 235).

INTERNATIONAL LABOR OFFICE.—*Abolition of fee-charging employment agencies. (First item on agenda of International Labor Conference, 17th session, Geneva, 1933, Questionnaire I.) Geneva, 1932. 28 pp. (World Peace Foundation, Boston, Mass., American agent.)*

— *Invalidity, old-age, and widows' and orphans' insurance. (Second item on agenda of International Labor Conference, 17th session, Geneva, 1933, Questionnaire II.) Geneva, 1932. 81 pp. (World Peace Foundation, Boston, Mass., American agent.)*

— *Studies and Reports, Series A, No. 35: Studies on industrial relations, II. Geneva, 1932. 162 pp. (World Peace Foundation, Boston, Mass., American agent.)*

This report covers the personnel activities and working conditions in the Zeiss Optical Works in Germany; the F. I. A. T. motor-car works and subsidiary plants in Italy; the Philips Works, manufacturing electrical apparatus, in the Netherlands; and the Sandvik Steel Works in Sweden.

ITALY.—Associazione Nazionale per la Prevenzione degli Infortuni sul Lavoro. *Statistica degli infortuni in agricoltura sotto l'aspetto delle casuali, 1929. Milan, 1932. 138 pp., maps, chart.*

Report on accidents in agriculture and their causes, during the year 1929.

— Cassa Nazionale per le Assicurazioni Sociali. *Per la salute degli operai (un biennio di attività nel campo assistenziale), per Giovanni Indri. [Rome, 1927?] 282 pp.*

An account of what was done by the Italian National Institute for Social Insurance during 1926 and 1927 at health stations, sanitariums, and hot baths to improve the health of the working class.

MANITOBA (CANADA).—Workmen's Compensation Board. *Report for 1931. Winnipeg, 1932. 32 pp.*

Reviewed in this issue.

NORWAY.—Hovedstyret for Statsbanene. *Norges jernbaner: Beretning for året 1 Juli 1930–30 Juni 1931. Oslo, 1932. 248 pp., charts, map.*

Annual report on the State railways in Norway for the fiscal year ending June 30, 1931, including personnel, pension funds, accidents, etc.

— Rikstrygdeverket. *Sjømannstrygden, 1929. Oslo, 1932. 34 and 17 pp. (Norges Offisielle Statistikk VIII, 183.)*

Annual report on the operation of the system of insurance against accidents in sea fisheries in Norway during 1929, including statistics of accidents from 1913 to 1929, number of beneficiaries, and financial transactions of the system.

OSLO (NORWAY).—Arbeidskontor. *Arsberetning, 1930. Oslo, 1932. 28 pp., charts.*

Annual report of the Oslo public employment service for the year 1930.

PRUSSIA (GERMANY).—Statistisches Landesamt. *Statistisches Jahrbuch für den Freistaat Preussen. Berlin, 1931. 471 pp.*

This statistical yearbook for Prussia includes data on wages and earnings, employment and unemployment, and unemployment insurance and relief.

VIENNA (AUSTRIA).—Kammer für Arbeiter und Angestellte. *Wie leben die Wiener Heimarbeiter? von Kathe Leichter. Vienna, 1928. 146 pp.*

A report on home work in Vienna, including information on the home workers and their employers, hours of labor, earnings, unemployment, health conditions, etc.

WARSAW (POLAND).—Magistrat. *Rocznik statystyczny Warszawy, 1929. Warsaw, 1931. [Various paging.]*

Includes statistics on housing, cost of living, wages, employment service, industrial disputes, social insurance, charity, etc., in the city of Warsaw, Poland, in 1929.

WESTERN AUSTRALIA.—Government Statistician. *Pocket yearbook of Western Australia, 1932. Perth, 1932. 117 pp.*

Includes data relating to building and cooperative and provident societies, employment, immigration and emigration, old-age and invalidity pensions, retail prices, trade-unions, and wages.

Unofficial

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *The Annals, vol. 161: Modern insurance developments. Philadelphia, May, 1932. 284 pp.*

The material presented in this volume is classified under the following main heads: Life insurance; property and casualty insurance; educational trends, and insurance tendencies in foreign countries. The articles of special labor interest include: Industrial pensions, Group insurance, Workmen's compensation insurance, Unemployment compensation in the United States, and Accident and health insurance. The developments in the field of group insurance, as described in the article mentioned, were reviewed in the Labor Review for July, 1932 (p. 53).

CALIFORNIA, UNIVERSITY OF. Heller Committee for Research in Social Economics. *Cost of living studies: Budget for dependent families or children. For use by social welfare agencies. Berkeley, 1932. 36 pp. (Mimeographed.)*

The suggested budget was given in the Labor Review for July, 1932 (p. 234.)

COMMITTEE ON THE COSTS OF MEDICAL CARE. *Publication No. 14: The costs of medicines; the manufacture and distribution of drugs and medicines in the United States and the services of pharmacy in medical care, by C. Rufus Rorem and Robert P. Fischelis. Chicago, University of Chicago Press, 1932. 250 pp.*

— *Publication No. 16: The healing cults. A study of sectarian medical practice—its extent, causes, and control, by Louis S. Reed. Chicago, University of Chicago Press, 1932. 134 pp.*

DIX, LESTER. *The economic basis for the teacher's wage. New York, Lincoln School of Teachers College, Columbia University, 1931. 114 pp., charts.*

HOFFMAN, FREDERICK L. *Life and death in the medical profession. Newark, Prudential Press, 1932. 28 pp.*

The economic status of physicians and the physical demands of their profession are discussed in relation to their effects upon mortality rates. The reporting upon causes of death among physicians is very unsatisfactory at the present time, but the available statistics are discussed and the ways in which methods of reporting could be improved are pointed out.

ILLINOIS, UNIVERSITY OF. Agricultural Experiment Station. *Bulletin 372: Living expenditures of a selected group of Illinois farm and small-town families (1929-30), by Ruth Crawford Freeman and M. Attie Souder. Urbana, Ill., 1931. 211 pp., map, chart.*

Reviewed in this issue.

INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS. *Progress. Washington, 1932. 30 pp.*

Report on salaries prevailing in January, 1931, and on working conditions, vacations, and civil service regulations in 1931, in fire departments of various cities in the United States and Canada. Pension systems for firemen are shown for specified cities in the United States.

KIEHEL, CONSTANCE A. *Unemployment insurance in Belgium: A national development of the Ghent and Liège systems. New York, Industrial Relations Counselors (Inc.), 1932. 509 pp., map, charts.*

This is the fourth in a series of reports covering a world-wide study of unemployment insurance, the other countries covered being Great Britain, Switzerland,

and the United States. The volumes already published cover the four main systems of providing unemployment compensation, the present one treating of the partly voluntary and partly subsidized system in force in Belgium.

LUPIN, FRIEDRICH F. v. *Die indische Textilindustrie als Industrie eines kolonialen Rohstofflandes.* Jena, 1931. 352 pp., maps, charts. (*Probleme der Weltwirtschaft, Schriften des Instituts für Weltwirtschaft und Seeverkehr an der Universität Kiel*, 49.)

Deals with the textile industry in India, including labor cost as compared with that in England

MAASS, HERMANN. *Hundert Jahre Kampf um Jugendschutz.* Berlin, Reichsausschuss der deutschen Jugendverbände, 1931. 98 pp.

Deals with the history and the present conditions of the struggle for the protection of the youth in Germany, including legislation, child labor, schooling of children, factory inspection, wages and hours of labor, unemployment, etc.

MCAULIFFE, EUGENE. *The romance and tragedy of coal.* Omaha, Cononial Press, 1931. 97 pp.

The author traces the history of the coal-mining industry and devotes chapters to rentals and royalties, underground slavery, wage and labor facts, accident-prevention machinery, and production and prices.

MAHR, ALEXANDER. *Hauptprobleme der Arbeitslosigkeit.* Leipzig and Vienna, Franz Deuticke, 1931. 93 pp. (*Wiener Staats- u. Rechtswissenschaftliche Studien, Band XX.*)

Deals with unemployment problems, including wages and their influence upon production, monopolistic industries and unemployment, rationalization and unemployment, decrease of seasonal unemployment, public works, shortening of labor time, decrease of wages as an unemployment-relief measure, and other plans which have been undertaken to combat unemployment in Germany.

MARTIN-LEAKE, M., AND SMITH, THYRA. *The scientific selection and training of workers in industry and commerce.* London and New York, Isaac Pitman & Sons (Ltd.), 1932. 104 pp., diagrams.

The main purpose of the authors, as set forth by them, is to help reduce one of the principal sources of waste in commerce and industry—the human misfit.

METROPOLITAN LIFE INSURANCE CO. *Social Insurance Monograph 6: The limitations of unemployment insurance.* New York, 1932. 26 pp.

The unemployment-insurance plans of Great Britain, Germany, Denmark, and Switzerland are analyzed from the standpoint of their necessary limitations.

MINNESOTA, UNIVERSITY OF. Employment Stabilization Research Institute. *Proceedings of the Minnesota Conference on Unemployment Relief and Stabilization, November 17-19, 1931.* Minneapolis, University of Minnesota Press, 1932. 95 pp.

The various papers presented at this conference are classified under five main heads: Administrative problems of unemployment relief; public employment exchanges; stabilization and unemployment reserves; individual plant management, its relation to the causes and problems of industrial readjustments; and individual plant management and industrial readjustments.

NATIONAL BUREAU OF ECONOMIC RESEARCH (INC.). *Publication No. 18: International migrations, Volume II—Interpretations, by a group of scholars in different countries.* Edited by Walter F. Willcox. New York, 51 Madison Avenue, 1931. 715 pp., charts.

NATIONAL CIVIC FEDERATION. Woman's Department. *The woman power of the Nation.* New York, 9 East 40th Street, [1932?]. In two parts. 24 and 39 pp.

NATIONAL EDUCATION ASSOCIATION. Research Division. *Research Bulletin, Vol. IX, No. 3: Salaries in city school systems, 1930-31.* Washington, 1201 Sixteenth Street, NW., 1931. 66 pp., charts.

Data from this study were given in the Labor Review for July, 1932 (p. 167).

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *Salary and wage policy in the depression.* New York, 247 Park Avenue, 1932. 67 pp., charts.

Reviewed in this issue.

— *Wages in the United States in 1931.* New York, 247 Park Avenue, 1932. 78 pp., charts.

NEW ENGLAND COUNCIL. Industrial Committee. *What New England manufacturers are doing to improve earnings in 1932.* Boston, Statler Building, 1932. 7 pp.

Data regarding the employment measures adopted by manufacturers reporting to the New England Council, taken from the report, are given in this issue of the Labor Review.

NORWAY YEAR BOOK, 1931. Oslo, Sverre Mortensen Forlag A/S, [1931]: 408 pp.

Contains textual and statistical information for Norway for 1930 and 1931, including prices and wages, employment, trade-unions, arbitration of industrial disputes, etc.

SEYMOUR, JOHN B. *The Whitley councils scheme.* London, P. S. King & Son (Ltd.), 1932. 253 pp.

The Whitley councils, proposed in 1916 as a means for improving relations between employers and employees and for bringing the intelligence of both sides to bear upon the task of progressively bettering industrial conditions, met with much favor at the time, but have seemed unable to maintain their original position. The first was established in 1917, and within three years 73 national councils had been formed; the movement then slowed down, and by the end of 1929 only 10 more national councils had been formed. The present writer, in addition to tracing the development of the system, reviews the arguments for and against the councils, discusses what they accomplished, and deals with the difficulties they have encountered. It is unlikely, he considers, that the system will be extended much further in British industry, chiefly owing to the indifference of many of those concerned. He feels, however, that they have done good work in the past, and have valuable possibilities for the future, which ought to be worked out either through the councils or some other joint representation system. An appendix gives sample constitutions of joint industrial councils and works committees, and a bibliography.

SMITH, THURBER M. *The unemployment problem—a Catholic solution from the viewpoints of ethics, history, and social science.* New York, Bruce Publishing Co., 1932. 218 pp.

TAYLOR, PAUL S. *Mexican labor in the United States: Chicago and the Calumet region.* Berkeley, University of California Press, 1932. 260 pp., maps. (University of California Publications in Economics, vol. 7, No. 2).

Some statistics on Mexican labor in the localities covered in this report were published in the January, 1931, issue of the Review.

TIMMONS, B. F. *Personnel practices among Ohio industries.* Columbus, Ohio State University Press, 1931. 136 pp., charts. (Ohio State University, Bureau of Business Research Monographs, No. 18.)

The study covers the personnel practices of 189 Ohio industrial companies. It was found that the larger part of the activities covered by the study were carried out by the large establishments, that is, establishments employing 1,500 or more workers.

VERBAND DER BUCHBINDER UND PAPIERVERARBEITER DEUTSCHLANDS. *Geschäftsbericht 1931.* Berlin, [1932?]. 215 pp.

Yearly report on the activities of the Union of Bookbinders and Paper Workers in Germany during 1931, including membership, administrative personnel, working hours, wages, employment, unemployment, insurance against unemployment and other kinds of social insurance, trade agreements, accidents, industrial disputes, and other labor conditions.